Simply

Good and Beautiful

MATH 2

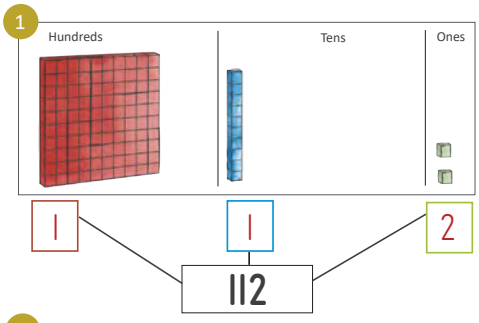
ANSWER KEY

The Good and the Beautiful
CURRICULUM

Simply Good and Beautiful MATH 2 ANSWER KEY

Read to the child: Look at box #1 below. Point to the ones column and tell me how many one blocks are in it. [2] Write "2" in the green box. A ten stick is a stick with 10 blocks. Point to the tens column and tell me how many ten sticks are in it. [1] Write "1" in the blue box. A hundred square is made of 10 ten sticks, and 10 ten sticks equal a hundred square. Point to the hundreds column and tell me how many hundred squares are in it. [1] Write "1" in the red box. Look in the black box. When we put all the digits together, what is the number? [112] For each box below, do the same thing you did for the first box, but also write the final number in the black box.

1



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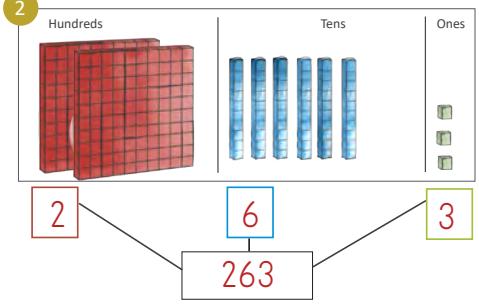

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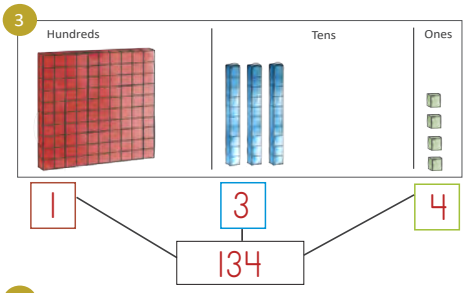

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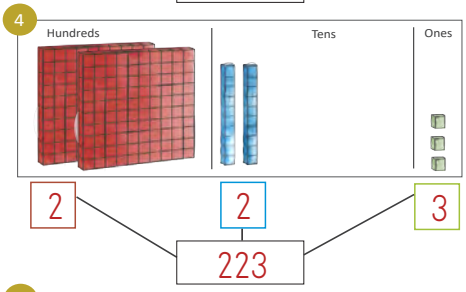

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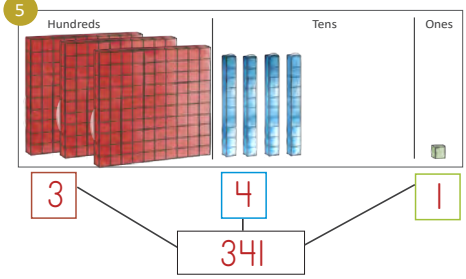


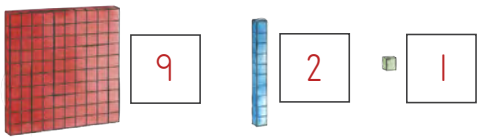
Read to the child: Look how we can put each digit in the number 843 in its place value column.

843

Hundreds	Tens	Ones
8	4	3

For each number write how many of each base-10 item is needed to make the number.

921



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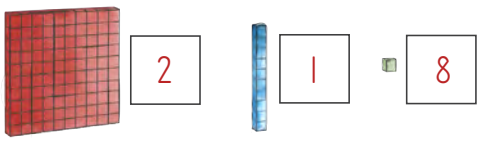
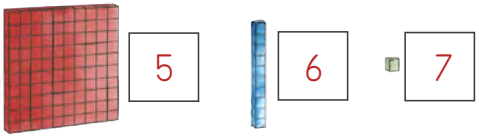


567



Read to the child: In this lesson and a future lesson, we will be reading about Ebony, whose family owns a small butterfly farm. Her family raises butterflies and sells them to museums and zoos. Here's a picture of Ebony walking through her family's butterfly farm. She woke up early in the morning, and the farm was quiet and cool. When it is cool, butterflies rest and are often hidden in the bushes. Ebony looked around and counted 134 butterflies. Have the child write "134" on the whiteboard. What digit is in the ones place? [4] Tens place? [3] Hundreds place? [1]

Six hours later, when it was warmer, Ebony counted all the butterflies she could see. This time she counted 342. Have the child write "342" on the whiteboard. What digit is in the ones place? [2] Tens place? [4] Hundreds place? [3]

INDEPENDENT REVIEW

Butterflies love all of these flowers except one. Complete the addition problems and circle the problem with the highest number. The flower above it is the flower that butterflies don't love.


Daisies


Lavender


Roses


Asters


Daffodils


Coneflowers

5 + 7 = 12 | 4 + 8 = 12 | 7 + 7 = 14 | 7 + 6 = 13 | 9 + 3 = 12 | 4 + 7 = 11

Write the number words.

thirteen
thirteen
fourteen
fourteen
eleven
eleven
twelve
twelve

Write and complete the problem for the story.

Ebony also loves dragonflies, which she finds by the pond. In the morning she saw 5 dragonflies.

In the afternoon she saw 5 more dragonflies. How many did she see total?

5 + 5 = 10

Write an odd number with one digit on every sign pointing right.

Write an odd number with two digits on every sign pointing left.

Answers will vary.

Lesson 2

IDENTIFYING AND WRITING NUMBERS TO 1,000

Odd Numbers + Counting Backward

- Have the child tell you what every odd number ends with. [1, 3, 5, 7, or 9]
- Have the child skip count by odd numbers from 1 to 25.
- Have the child count backward from 20 to 1.

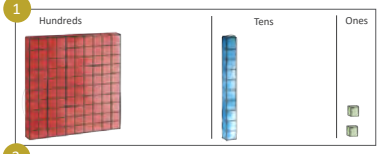
Extra Item
bowl

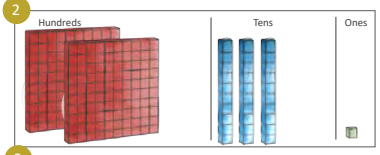
○ Read to the child: Look at the picture of a flock of birds. Without counting the birds, would you guess that there are 16 or 163 birds in this picture?

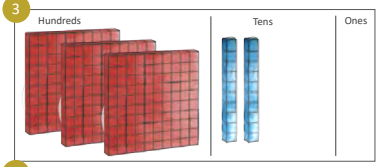
○ Read to the child: Many types of birds fly in flocks of hundreds. Today, we are going to talk about numbers in the hundreds. First, let's count by 100s from 100 to 1,000. Point to the numbers below as you count and notice how 10 hundreds equal 1,000.

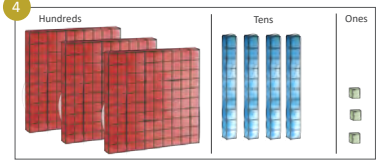

100 200 300 400 500 600 700 800 900 1,000

○ Read to the child: A hundred square has 100 one blocks. Each blue ten stick has 10 one blocks. Each green block represents one. Write the number represented by each group of base-10 items. The first one is completed as an example. If the place value is empty, then write a zero for that digit.

1 
Hundreds Tens Ones
112

2 
Hundreds Tens Ones
231

3 
Hundreds Tens Ones
320

4 
Hundreds Tens Ones
343

○ Take the squares (with the stars on one side and numbers on the other side) from the math box a[illegible]t them in a bowl. Read to the child: We are go[illegible], a game. We will each take 3 digits out of th[illegible]d arrange them to make the greatest num[illegible]ie. We will each read our number aloud, a[illegible]d tell me which number is greater. The person [illegible]the greater number wins that round. Play as many rounds as desired.

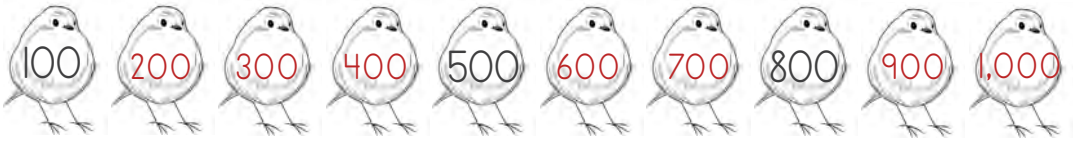
Answers will vary.

INDEPENDENT REVIEW

Fill in the missing numbers on the chart.

931	932	933	934	935	936	937	938	939	940
941	942	943	944	945	946	947	948	949	950
951	952	953	954	955	956	957	958	959	960
961	962	963	964	965	966	967	968	969	970
971	972	973	974	975	976	977	978	979	980
981	982	983	984	985	986	987	988	989	990
991	992	993	994	995	996	997	998	999	1,000

Robins and other birds can fly in flocks of hundreds. Counting by 100s from 100 to 1,000, write the missing numbers on the birds.



Complete the addition problems.

5 + 2 = 7	3 + 4 = 7	3 + 3 = 6	7 + 2 = 9	5 + 4 = 9	8 + 1 = 9	2 + 6 = 8	3 + 5 = 8	2 + 4 = 6	5 + 5 = 10

Lesson 3

SKIP COUNTING BY 5Os

Spelling Numbers One to Ten

On a whiteboard, have the child spell numbers one to ten. If the child misspells any of the words, write them on an index card and practice them each day until mastered, or have the child watch these videos on The Good and the Beautiful Kids YouTube channel: "How to Spell One, Two, Three," "How to Spell Four, Five, Six," and "How to Spell Seven, Eight, Nine."

○ Read to the child: If you look closely at the world outside, you will see the importance of numbers. They aren't hanging from the trees as a "1" or a "5" or an "8," but they are there. God is the Master Mathematician, and we will study many of His divine patterns and math principles in this course.

Take a look at this flower. How many blue petals does it have? [2]

Let's suppose that you see a row of these Asiatic dayflowers along a path, and you want to count how many blue petals there are in total. It is easier to count by 2s than to count each petal individually. Point to each flower as you count by 2s to count all the blue petals on the path. In the blue box, write the total number of blue petals.

34

Different types of ladybugs have different numbers of spots. How many spots does the ladybug on this page have? [10]

This type of ladybug is pictured on the leaves below. If we wanted to know how many total spots there are on all the ladybugs, it would be easier and faster to count by 10s. Point to each ladybug as you count by 10s. Write the total number of spots in the blue box.

120

How many petals does this purple periwinkle flower have? [5] If we wanted to know how many total periwinkle petals there are in this window box, it would be easier and faster to count by 5s. Point to each flower as you count by 5s. Write the total number of periwinkle petals in the blue box.

60

○ Read to the child: Now that we have practiced skip counting, which we learned in Math 1, let's learn another number we can use to count quickly—50. Fifty is half of 100. So when we count by 50s, we go 50, 100, 150, 200, 250, and so on. Can you see the pattern? After every hundred, we add 50 and then go to the next 100. Count by 50s aloud from 50 to 1,000 as the child listens, and then have the child do it with you twice. Help the child fill in the missing numbers on the chart. Then have the child point to the numbers and count by 50s until he or she can count from 50 to 1,000 without looking at the chart.

50	100	150	200	250	300	350
400	450	500	550	600	650	700
750	800	850	900	950	1,000	

○ Have the child complete the addition problems. If needed, use the chart above. Show him or her how to skip count to figure out the problem.

50 + 50 + 50 = 150

50 + 50 + 50 + 50 = 200

○ Have the child use the chart above to answer the following questions.

What number is 50 less than 150? 100

What number is 50 less than 300? 250

What number is 50 less than 250? 200

INDEPENDENT REVIEW

Count by 2s to fill in the missing numbers. Then circle your favorite animal.

2	4	6	8	10	12	14	16

Complete the addition problems.

5 + 3 = 8	5 + 4 = 9	4 + 4 = 8	5 + 1 = 6	7 + 0 = 7	6 + 3 = 9	7 + 2 = 9	12 + 2 = 14	13 + 3 = 16

Write and complete the problem for the story.

The beaver cut down 3 trees last week and 4 trees this week. How many trees did he cut down total?

3 + 4 = 7

Draw rain falling on every tree that has an even number (ends with 0, 2, 4, 6, or 8). Draw lightning striking the tree with the greatest number.

Lesson 4

SPELLING 13, 14, AND 15

Odd Numbers + Counting Backward

- Have the child tell you what every odd number ends with. [1, 3, 5, 7, or 9]
- Have the child skip count by 50s from 50 to 300.
- Have the child count backward from 20 to 1.

○ Read to the child: Today we get to play a space game. You will need to know how to spell 13, 14, and 15, so first complete this spelling practice.

thirteen thirteen

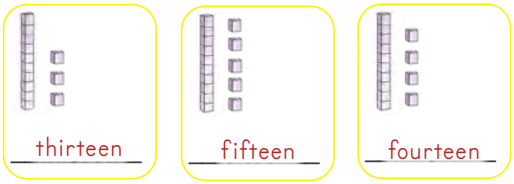
fourteen fourteen

fifteen fifteen

○ **Planet Path Game:** Take the rocket from the math box and give it to the child. Read to the child: In this game you will try to visit all the planets on the page without getting stuck! You'll begin on Mars, so place your rocket on Mars. To move your rocket to another planet, you must first spell aloud the number on the planet. Mars has the number 13 on it, so you'll spell the number word for 13. If you spell the number word correctly, you can move your rocket 1 planet up, down, sideways, or diagonally. You're not allowed to skip planets or go back to planets that you've already visited. If you get stuck and can't move, place your rocket back on Mars and start again. (Please note that Pluto is a dwarf planet.)

Planet Path Game

○ Have the child write the number word represented by the blocks.



INDEPENDENT REVIEW

Count by 50s to fill in the missing numbers.

50	100	150	200	250	300	350	400	450	500

Complete the addition problems by counting by 50s. If needed, use the chart above.

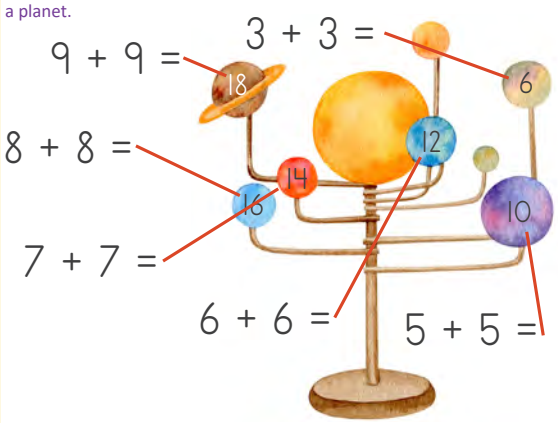
50 + 50 + 50 = 150

150 + 50 + 50 = 250

Complete the subtraction problems.

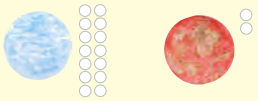
$$\begin{array}{r} 6 \\ -\ 1 \\ \hline 5 \end{array} \qquad \begin{array}{r} 7 \\ -\ 2 \\ \hline 5 \end{array} \qquad \begin{array}{r} 8 \\ -\ 1 \\ \hline 7 \end{array}$$

Draw a line from each doubles addition problem to the correct answer on a planet.



Write and complete the problem for the story.

Neptune has 14 moons. Mars has 2 moons.



How many moons do Neptune and Mars have total?

14 + 2 = 16

As of 2021, many unpiloted rovers or orbiters have visited the planets below. Complete the problem below each planet. The planet with the largest answer has been visited the most. (Note: The answers do not reflect the total number of rovers or orbiters that have visited each planet.)


Mercury

$10 - 8 = 2$


Mars

$3 + 3 = 6$


Neptune

$8 - 7 = 1$


Jupiter

$7 - 3 = 4$

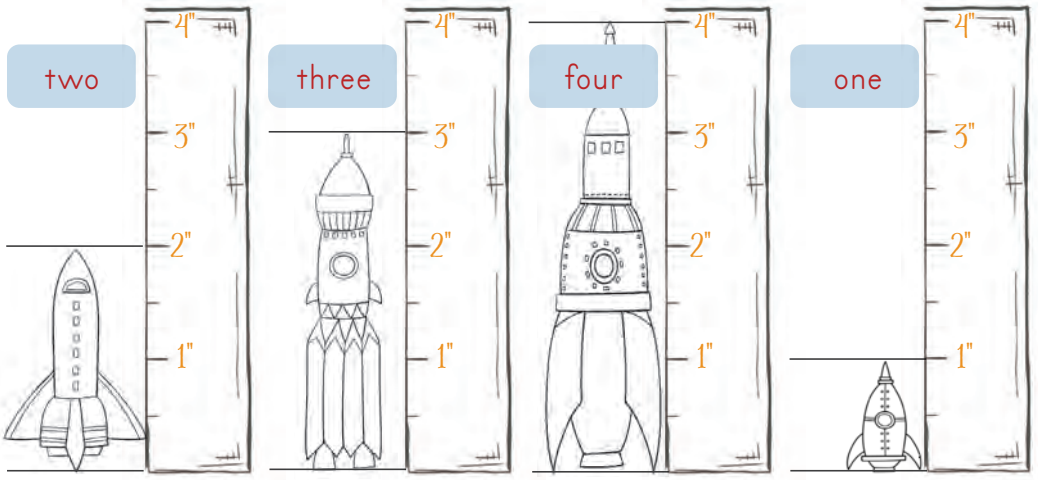

Venus

$1 + 4 = 5$


Saturn

$9 - 6 = 3$

How many inches long is each toy rocket? Write the answers with number words (like "one" or "two," not "1" and "2") in the blue boxes.



Lesson 5

COUNTING BILLS

Skip Counting + Counting Backward

- Have the child skip count by 50s from 50 to 300.
- Have the child skip count backward by 50s from 300 to 50.
- Have the child skip count by 5s from 100 to 200.

Read to the child: Matthew 6:19–20 says, "Lay not up for yourselves treasures upon earth. . . . But lay up for yourselves treasures in heaven." We should not set our hearts on money, but we can use money to do good things. Here is a story of how a town used money for good purposes.

Danny and his family lived in the beautiful valley shown on this page. One day their barn burned down, and his family didn't have enough money to build another one. Mr. Garcia, Danny's neighbor, wanted to help Danny's family get wood and paint for a new barn. Mr. Garcia arranged a town bake sale to help Danny's family. The town earned just enough money for Danny and his family to build a new barn. Let's count the money.

Take 5 $1 bills, 10 $5 bills, 9 $10 bills, 3 $20 bills, 5 $50 bills, and 9 $100 bills from the math box and show the child the bills. Point out how to tell the difference between the bills. Put the bills into a pile and mix them all together.

First, we need to sort the money into like bills. Help the child sort the money with all the ones, fives, tens, twenties, fifties, and hundreds in their own piles. We use skip counting when we count the value of bills larger than one dollar. When counting with money, we begin with the largest bills. What are the largest bills? [hundreds] Have the child count the $100 bills (saying "one hundred, two hundred, three hundred," etc.) and write the total in the blue box. Follow the same procedure to have the child count the rest of the bills and write the amounts in the boxes.

Total Amount in Hundreds =	$ 900
Total Amount in Fifties =	$ 250
Total Amount in Twenties =	$ 60
Total Amount in Tens =	$ 90
Total Amount in Fives =	$ 50
Total Amount in Ones =	$ 5

Using the different bills, have the child make each dollar amount listed. Be sure the child starts by using the largest bill amount before using smaller bills.

$150 $100 $40 $30

INDEPENDENT REVIEW

Count by 2s to fill in the missing numbers.

40	42	44	46	48	50	52	54	56

Complete the addition problems.

8 + 8 = 16	9 + 9 = 18	7 + 7 = 14	6 + 6 = 12	5 + 5 = 10	4 + 4 = 8	3 + 3 = 6

Write the number words.

thirteen
thirteen
fourteen
fourteen
fifteen
fifteen
eleven
eleven

Write and complete the problem for the story.

Mrs. Jones made these cakes for the bake sale.

She sold the cakes below. How many cakes does she have left?

5 − 3 = 2

Write the missing letters for each number.

thirteen

fifteen

fourteen

eleven

Lesson 6

DOUBLES ADDITION TO SUMS OF 18/STAR LOGIC

Odd Numbers + Counting Backward

- Have the child tell you what every odd number ends with. [1, 3, 5, 7, or 9]
- Have the child skip count by odd numbers from 1 to 25.
- Have the child count backward from 20 to 1.

○ Read to the child: We often use memorization in math. For example, it can be helpful to memorize doubles addition. Let's practice doubles addition problems from Math 1. Point to each problem and say the answer aloud. Repeat as many times as desired.

9 + 9 = 18	8 + 8 = 16	7 + 7 = 14	6 + 6 = 12	5 + 5 = 10	4 + 4 = 8	3 + 3 = 6

Often we use logic in math. Logic means "a reasonable way of thinking about something." Thinking logically helps you to come up with the most reasonable solution. Throughout this course, we will practice logic through activities that use our stars.

○ Take the stars from the math box. Work through the puzzles with the child, helping him or her to use logic to place the stars in the correct boxes.

Star LOGIC

PUZZLE 1

Use 1 red star, 1 yellow star, and 1 dark-purple star.

Clue 1: The red star is not first, and it is not next to the dark-purple star.

Clue 2: The yellow star is next to both the red star and the dark-purple star.

PUZZLE 2

Use 1 brown star, 1 orange star, and 1 light-green star.

Clue 1: The brown star is to the right of the orange star.

Clue 2: The orange star is to the right of the light-green star.

PUZZLE 3

Use 1 red star, 1 yellow star, and 1 light-purple star.

Clue 1: The red star is on the left side of the light-purple star.

Clue 2: The yellow star is not in the first box.

How Many $5 Bills?

○ Take the $5 bills out of the math box. Have the child figure out and hand you the number of $5 bills needed to buy each item.

How Many $20 Bills?

○ Take the $20 bills out of the math box. Have the child figure out and hand you the number of $20 bills needed to buy each item.

INDEPENDENT REVIEW

Write and complete the problem for the story.

Eric saw 50 butterflies at 8:00 AM. He saw 50 more butterflies at 9:00 AM. How many butterflies did he see in total?

50 + 50 = 100

Write and complete the problem for the story.

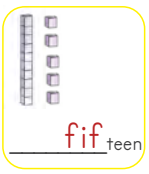
Kevin had 17 grapes on his vine. He picked 12 grapes. How many grapes does he have left on the vine?

17
− 12
5

Write the number words.

thirteen
thirteen
fourteen
fourteen
fifteen
fifteen
eleven
eleven

Write the missing letters for each number.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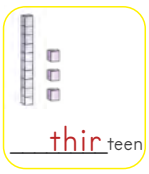
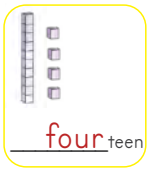

thir teen


four teen


el even

Count by 50s to fill in the missing numbers.

50	100	150	200

Count by 10s to fill in the missing numbers.

30	40	50	60

Count by 100s to fill in the missing numbers.

200	300	400	500

Complete the addition problems.

3 + 3 = 6	4 + 3 = 7	5 + 4 = 9	7 + 3 = 10	4 + 3 = 7	7 + 7 = 14	8 + 8 = 16

Complete the addition problems by counting by 50s and then adding 1.

100 + 50 + 1 = 151

50 + 50 + 50 + 1 = 151

Lesson 7

TALLY MARKS/ WORKING WITH BILLS

Skip Counting

Have the child skip count by 50s from 50 to 300 and then backward by 50s from 300 to 50.

- Read to the child: Using tally marks is a way to record your counting. Point to the four tally marks. Here are four tally marks. Point to the five tally marks. The fifth tally mark is slanted across the four others like this. When we count groups of tally marks, we are counting by 5s. It saves time counting because we don't have to count every individual mark. To count the following group of tally marks, start with counting by 5s until you reach the last group of 5 tally marks. Then count on, adding 2 more to that number. How many tally marks did you count? [42]

- Take all the $1, $5, $10, $20, and $50 bills from the math box. For each set of tally marks, have the child count them and then show you the equivalent amount in bills by using the fewest number of bills possible.

- **Travel to the Moon Game:** Give the child a rocket and the bills from the math box. Have the child place the rocket beside the bottom yellow box in the next column. To move up to each yellow box and eventually reach the moon, the child must count out bills to match the number of tally marks using the fewest number of bills. The child moves back one if he or she does not use the correct bills. Keep going until the moon is reached.


1 $20; 1 $5


1 $50; 2 $20; 2 $1


1 $20; 1 $10; 4 $1

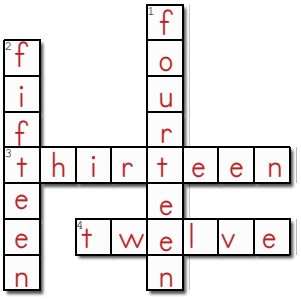

1 $50; 2 $20


2 $20


1 $20; 1 $10; 2 $1

INDEPENDENT REVIEW

Complete the crossword puzzle using number words.



Across
3. The number after 12
4. 10 + 2

Down
1. The number before 15
2. 10 + 5

Count by 50s to fill in the missing numbers.

100	150	200	250	300

Count by 10s to fill in the missing numbers.

100	110	120	130	140

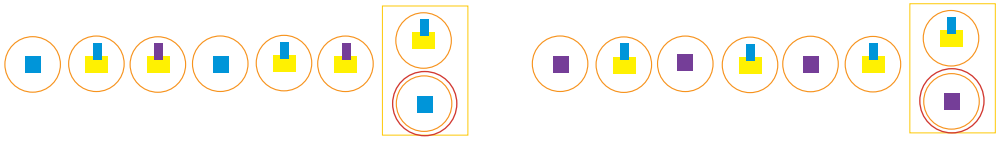
Count by 100s to fill in the missing numbers.

100	200	300	400	500

Complete the addition problems.

5 + 3 = 8	3 + 3 = 6	5 + 4 = 9	7 + 3 = 10	4 + 3 = 7	7 + 7 = 14	9 + 9 = 18

For each set of patterns, circle the picture that should come next.



Lesson 8

ZERO AS A PLACEHOLDER/ ADDING 2 TWO-DIGIT NUMBERS

Doubles Addition to 18

Test the child on the doubles addition problems below, which need to be memorized. Create flash cards for problems the child does not know instantly and practice them daily.

3 + 3 = 6 | 4 + 4 = 8 | 5 + 5 = 10 | 6 + 6 = 12

7 + 7 = 14 | 8 + 8 = 16 | 9 + 9 = 18

○ Read to the child: Zero is worth nothing. We must use zero when a place has no value so the next digit will be in the correct place. Write "506" on the whiteboard. For example, if we took zero out of the number 506, we would get 56, which is very different from 506. Write "56" on the whiteboard.

For each number, say the number aloud, and then write each digit in the correct place value column. Then tell me which place value (hundreds, tens, or ones) has a zero placeholder in it.

901

Hundreds	Tens	Ones
9	0	1

780

Hundreds	Tens	Ones
7	8	0

○ Read to the child: Do you remember Ebony from Lesson 1? Another way her family earns money is by having groups visit the farm. Yesterday, two different homeschool groups visited the farm. Let's figure out how many children total visited the farm yesterday. I will tell you the numbers, and you write a problem on the whiteboard. The first group had 24 people, and the second group had 33 people. The child should have written $\begin{array}{r} 24 \\ +\ 33 \end{array}$. Each number in this problem has two digits.

Let's complete it. When you add numbers with more than one digit, start in the ones place (the right-hand side). First, you will add 4 + 3 and write the answer below the numbers. Next, you move to the tens column, add 2 + 3, and write the answer below the numbers. [57]

One child who loves to draw created a chart to keep track of how many types of butterflies he found. You can see his chart on the next page. Look at the chart on the next page and use it to answer the questions I will ask you. Remember to always start in the ones place (the right-hand side) when solving addition problems with more than one digit.

Read to the child the text in the boxes and have him or her write the problems on the whiteboard.

How many orange tips and small coppers did he see? $\begin{array}{r} 12 \\ +\ 15 \\ \hline 27 \end{array}$

How many small coppers and peacocks did he see? $\begin{array}{r} 15 \\ +\ 21 \\ \hline 36 \end{array}$

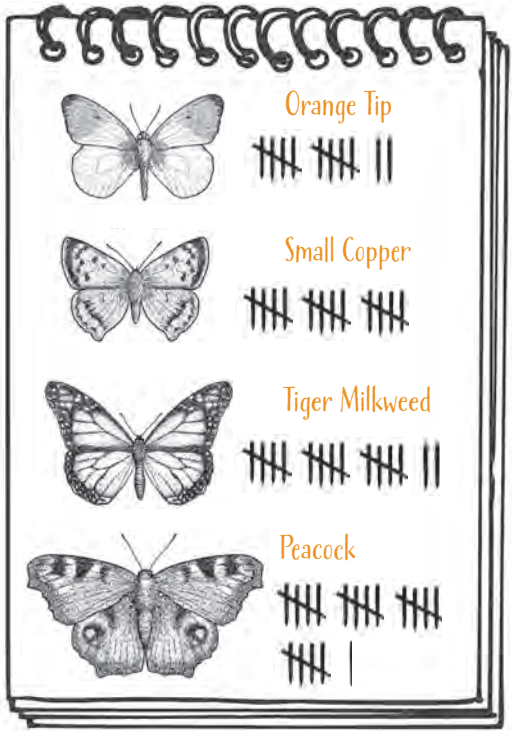
How many tiger milkweeds and peacocks did he see? $\begin{array}{r} 17 \\ +\ 21 \\ \hline 38 \end{array}$

How many orange tips and tiger milkweeds did he see? $\begin{array}{r} 12 \\ +\ 17 \\ \hline 29 \end{array}$

○ Read to the child: When adding the tens place in a two-digit addition problem, the sum may equal a number greater than 9. If the sum has two digits, we write both digits under the equal bar. Write both digits under the horizontal line, as shown in the problem in green. What number is in the hundreds place? [1] What place value is zero a placeholder for? [tens] Complete the problems on the next page.

$\begin{array}{r} 55 \\ +\ 53 \\ \hline 108 \end{array}$

63	52	24	54
+ 64	+ 66	+ 94	+ 55
127	118	118	109



INDEPENDENT REVIEW

With colored pencils, color each part of the butterfly according to the color key below. For the spots that do not have a problem, you can choose any color you like.

11 12 14 16 18

With number words, write the number of tally marks in each box.

𝍸 𝍸 III	thirteen
𝍸 𝍸 I	eleven
𝍸 𝍸 II	twelve
𝍸 𝍸 𝍸	fifteen

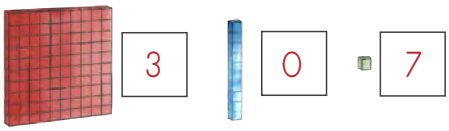
Complete the addition problems.

8	9	6	8
+ 4	+ 3	+ 3	+ 3
12	12	9	11

5	7	9	7
+ 2	+ 4	+ 5	+ 3
7	11	14	10

For each number, write how many of each base-10 item is needed to make the number.

307



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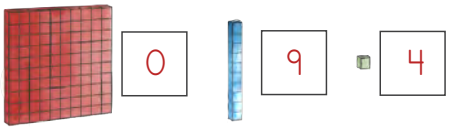

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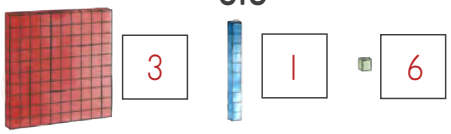

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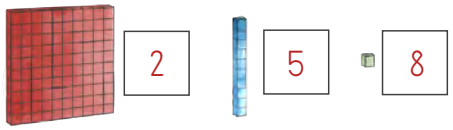


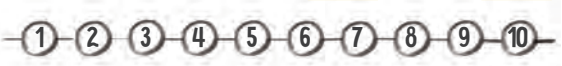
Lesson 9

SUBTRACTION STRATEGY #1

Have the child skip count backward by 5s from 100 to 5.

○ Read to the child: When subtracting two numbers, you can use various strategies to find the difference. One strategy is to count up from the lower number to the higher number. Practice this strategy by using the problems and number line below. To complete 10 – 5, we start at the 5 on the number line and count up by ones until we reach the 10. Let's count together. Point to the 5. Move up the number line, counting aloud as you reach each number. 1, 2, 3, 4, 5. What is 10 – 5? [5] Have the child complete the problems below using this strategy.

10 – 8 = 2 **4 – 2 =** 2 **9 – 6 =** 3

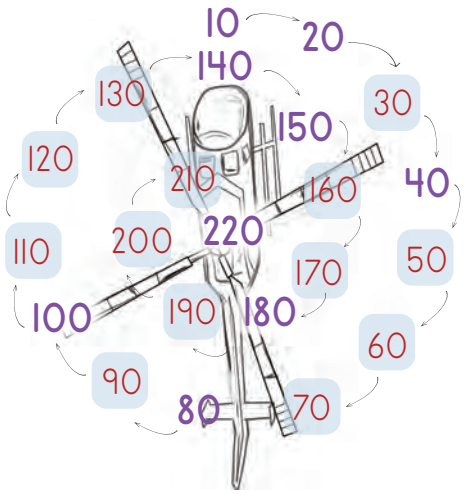


○ Give the child the helicopter from the math box. Read to the child: I will read a problem aloud. You place the helicopter on the landing pad with the correct answer below. Use the strategy of counting from one higher than the lower number up to the higher number (9 – 3, 7 – 6, 8 – 2, 6 – 1, 3 – 1).

○ **Helicopter Landing Game:** Take the 10-sided dice from the math box, and take turns rolling the dice and subtracting the number you rolled from the number 12. If the difference is listed on one of the landing pads below, write your initials to show you have won that landing pad. The person at the end of the game who has won the most landing pads wins the game!

INDEPENDENT REVIEW

A helicopter is able to fly thanks to its spinning blades. Following the rotating blades, skip count by 10s and fill in the missing numbers.



Copy the number words.

twelve	twelve
thirteen	thirteen
fourteen	fourteen
fifteen	fifteen

Complete the addition problems.

11 + 5 = 16	8 + 3 = 11	9 + 4 = 13	10 + 6 = 16

For each dollar amount shown, circle the bills you would use to equal the dollar amount. Hint: Circle the highest-value bills you can use first.

$76 $10 $20 $1 $50 $100 $5

$145 $10 $20 $5 $50 $100 $20

$136 $10 $20 $1 $50 $100 $5

Lesson 10

SUBTRACTION STRATEGY #2

Even Numbers

- Have the child tell you what every even number ends with. [0, 2, 4, 6, 8]
- Have the child skip count by even numbers from 2 to 30.

Skip Counting

Have the child skip count by 3s from 3 to 30 two times. If needed, have him or her use the chart.

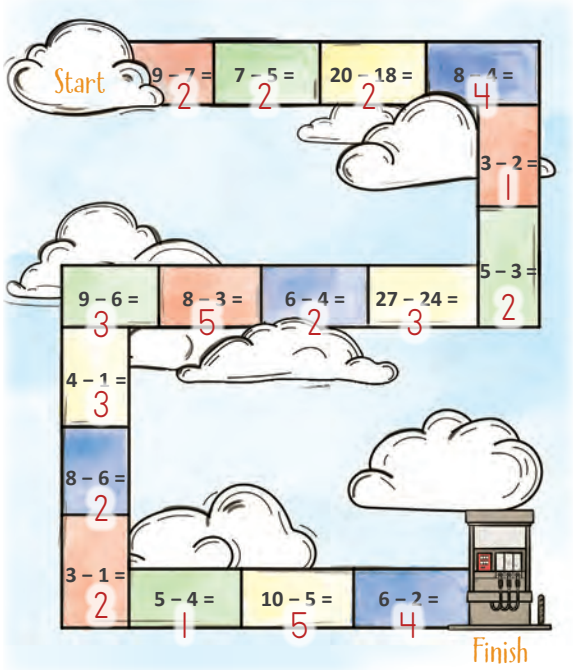
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

○ Read to the child: Another subtraction strategy is to count down from the higher number to the lower number. Practice this strategy using the problems and number line below. To complete 8 – 5, we start at the 8 on the number line and count down by ones until we reach the 5. Let's count together. Point to the 8. Move down the number line, counting aloud as you touch each number. 1, 2, 3. What is 8 – 5? [3] Have the child complete the problems below using this strategy.

7 – 5 = 2	9 – 2 = 7	7 – 6 = 1
5 – 3 = 2	6 – 4 = 2	4 – 1 = 3

1 2 3 4 5 6 7 8 9 10

○ Take any airplane from the math box and give it to the child. Read to the child: Your airplane is running out of fuel and needs to land! Beginning at "Start," make your way on the path through the clouds, completing the subtraction problems along the way using the counting down strategy or any strategy that works best for you. Say the answers aloud. For an extra challenge, you can track your time and then do it again to see if you get your airplane to the fuel faster! Hint: Using fingers to count when learning subtraction and addition is completely fine.



Star LOGIC

Take the stars from the math box and follow the clues to place the stars on the boxes in the right places.

PUZZLE 4

Use 1 purple star, 1 red star, and 1 orange star.

Clue 1: The orange star is next to both the purple star and the red star.

Clue 2: The purple star is to the left of the orange star.

PUZZLE 5

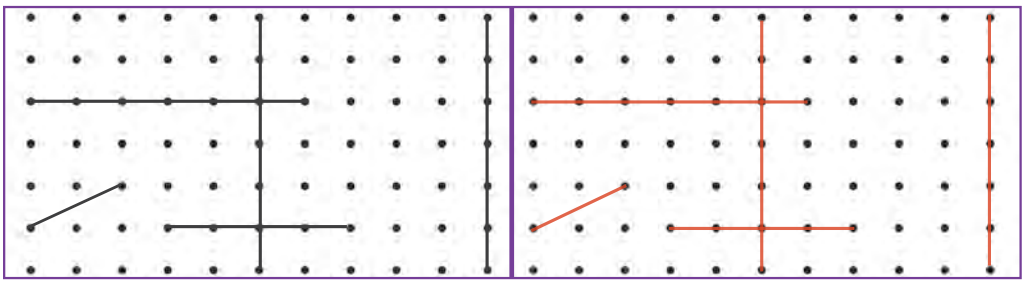
Use 1 yellow star, 1 dark-green star, and 1 brown star.

Clue 1: The dark-green star is to the left of the brown star.

Clue 2: The yellow star is to the right of the brown star.

INDEPENDENT REVIEW

On the right side of the pegboard, copy the lines from the left side.



Count by 50s to fill in the missing numbers.

100	150	200	250	300

Count by 10s to fill in the missing numbers.

100	110	120	130	140

Count by 100s to fill in the missing numbers.

100	200	300	400	500

Write and complete the problem for the story.

On board the airplane are 50 adults and 50 children. How many people in total are on the plane?

50 + 50 = 100

Lesson 11

COUNTING BY 25s

Skip Counting Backward

- Have the child skip count backward by 10s from 300 to 10.
- Have the child skip count backward by 5s from 30 to 5.

○ Read to the child: We've learned that 50 is half of 100. What is half of 50? [25] When counting by 25s, every fourth number in the sequence will be a multiple of 100. Point to the numbers and say each one aloud. Notice how each hundred is written in red.

Quarters are worth 25 cents, which is a quarter of a dollar. This means that four quarters are worth one dollar, which is 100 cents. Let's count to 225 by 25s by counting these quarters:

○ Have the child point to each box and count aloud by 25s. In the blank boxes, the child should figure out the number to say. Repeat the activity if desired.

25	50	75	100	125	150	175	200
225	250	275	300	325	350	375	400
425	450	475	500	525	550	575	600

○ **Up to the Clouds Activity:** Take an airplane from the math box and give it to the child. Read to the child: Let's practice counting by 25s using this airplane. Place your airplane on the cloud labeled 25. Fly your airplane to each cloud, counting by 25s aloud. Repeat this activity as many times as desired.

INDEPENDENT REVIEW

Write the digits in the number in the correct place-value columns.

942

Hundreds	Tens	Ones
9	4	2

673

Hundreds	Tens	Ones
6	7	3

Count by 50s to fill in the missing numbers.

50 | 100 | 150 | 200 | 250

Count by 10s to fill in the missing numbers.

100 | 110 | 120 | 130 | 140

Count by 100s to fill in the missing numbers.

100 | 200 | 300 | 400 | 500

Complete the addition problems.

62 + 63 = 125	54 + 61 = 115	23 + 92 = 115	56 + 52 = 108	25 + 94 = 119	53 + 54 = 107	27 + 91 = 118	55 + 52 = 107

Complete the addition problems by counting by 50s and then adding 1. If needed, use the chart above to count by 50s.

100 + 50 + 1 = 151

50 + 50 + 50 + 1 = 151

Lesson 12

TIME: PART 1

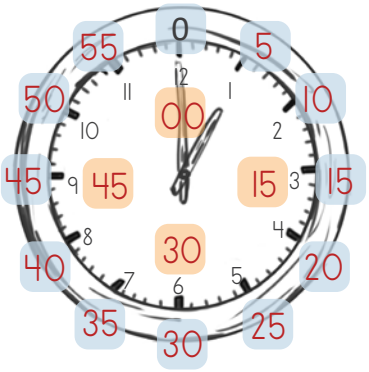
Skip Counting

Have the child skip count by 3s from 3 to 18 two times. If needed, have him or her use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

○ Read to the child: Look at the clock below. Each of the 12 numbers on the clock are five minutes apart. Count the small lines from one number to the next. Each small line represents one minute, so you know there are five minutes between each number. Instead of counting each small line, it's easier and faster to skip count by 5s for each number on the clock. Write the correct minutes in the blue boxes by counting by 5s.

Also, the orange boxes show us how the clock is divided into quarters. The first quarter of the hour is on the 3, which is 15 minutes past the hour, or a quarter after the hour.



For example, look at these clocks—they are all a quarter after the hour. I will point to each clock and tell you the time.

quarter after 1 or 1:15 | quarter after 8 or 8:15 | quarter after 12 or 12:15

Now you point to each of these clocks and tell me the time, starting with the phrase "quarter after."

quarter after 10 | quarter after 2 | quarter after 4

○ Take the clock from the math box and have the child show you the following times on the clock:

- quarter after 1
- 3:00
- quarter after 7
- 5:30
- 10:00
- quarter after 2

Read to the child: Let's practice telling time to the 5 minutes. Every time we jump from one number to the next on a clock, we jump 5 minutes. Give the child the clock from the math box. Let's start at 3:00 and count by five minutes from 3:00 to 4:00. I will say the time, and you move the clock to that time: 3:00, 3:05, 3:10, 3:15, 3:20, 3:25, 3:30, 3:35, 3:40, 3:45, 3:50, 3:55, 4:00. Great job!

Now, let me show you a helpful trick. Move the clock hands to 5:35. If I want to find out what time it is, I don't have to count by 5s starting at the 12. I know that the 6 is always 30 minutes after the hour, so I can just start with 30 and then count by 5s. I only have to jump 5 more minutes. Thirty plus 5 is 35, so it is 5:35. You try using this trick. I will set the clock, and you figure out the time by starting at 30 minutes after the hour and then counting by 5s. Set the clock to the following times and have the child tell you each time: 3:50, 4:40, 5:55.

Read to the child: Ethan and his dad sat on a hillside watching a hot-air balloon festival. They loved seeing the huge, brightly colored balloons float up into the sky, and soon the sky was dotted with color. Below are clocks that show the time that each hot-air balloon took off. I will tell you a time, and you point to the hot-air balloon by the clock that shows the time I say.

Draw the hands on the clocks to show the time that each balloon took off. Remember that the short hand moves closer to the next number as the hour goes by.

quarter past 7

1:55

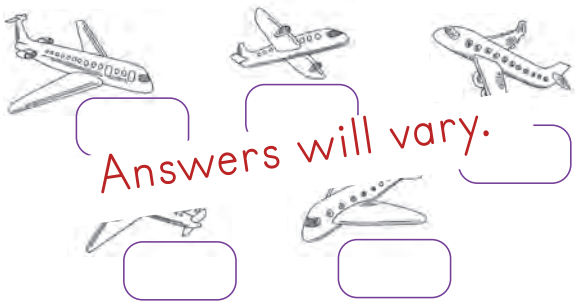
2:40

INDEPENDENT REVIEW

Write how many digits are in each number.

43 [2] 2 [1] 342 [3] 11 [2]

Write an odd number with one digit beneath every airplane flying right.
Write an odd number with two digits beneath every airplane flying left.



Count by 25s to fill in the missing numbers.

25	50	75	100	125

Count by 10s to fill in the missing numbers.

190	200	210	220	230

Complete the subtraction problems. Write the number word of the answer in the box.

|||| − ||| = two

|||| || − |||| = three

|||| |||| − || = seven

Complete the addition and subtraction problems.

8 − 4 = 4	9 + 3 = 12	7 + 3 = 10
7 − 4 = 3	3 + 8 = 11	7 + 5 = 12
9 − 4 = 5	4 + 6 = 10	9 − 5 = 4

Lesson 13

SUBTRACTION WITH TWO-DIGIT NUMBERS

Quiz the child on doubles addition facts from 2 + 2 up to 9 + 9. Practice the facts not memorized.

- Read to the child: Today we will subtract two-digit numbers! We will start on the right side with the ones column, subtracting the bottom digit from the top digit. Point to the ones column of the subtraction problem in green and then complete the problem.

$$\begin{array}{r} 59 \\ -\ 21 \\ \hline 38 \end{array}$$

- Read to the child: When adding numbers together, the order in which we add the numbers DOES NOT matter. Look at these two addition problems. The same numbers are being added together but in different orders. Complete each problem to see if you get the same answer.

$$\begin{array}{r} 45 \\ +\ 23 \\ \hline 68 \end{array} \qquad \begin{array}{r} 23 \\ +\ 45 \\ \hline 68 \end{array}$$

When subtracting numbers, the order in which we subtract the numbers DOES matter. We can see how this is true with a subtraction story problem. If an airplane has 12 seats, but you sit in 1 of them, how many seats are left? To figure it out, we write this equation. Write "12 – 1 = 11" on the whiteboard. Can we reverse that to "1 – 12" and have it make sense? No! Let's review: When we do addition, does the order of the numbers matter? [no] When we do subtraction, does the order of the numbers matter? [yes]

- **Airplane Hangars Game:** Take out the numbered squares 1–8 and an airplane from the math box. Place the squares in a row in front of the child, with the star side showing on top. To play the game, have the child follow and repeat these steps: 1) Land the airplane on a hangar of the child's choice. 2) Choose a star and turn over the square to show the number. 3) Complete the subtraction problems and find the problem that matches the number on the square. 4) If the difference matches the number shown on the chosen hangar, the child wins that hangar and circles it. Play a few rounds. Explain that this game is a game of chance and not strategy.

Airplane Hangars

1	2	3	4
78 − 25 = 53	86 − 43 = 43	49 − 37 = 12	68 − 34 = 34
5	**6**	**7**	**8**
79 − 65 = 14	45 − 25 = 20	85 − 43 = 42	63 − 42 = 21

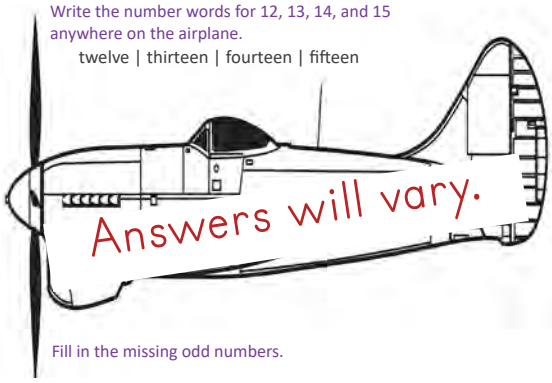
INDEPENDENT REVIEW

Complete each addition and subtraction problem.

84 + 84 = 168	93 + 93 = 186	62 + 62 = 124	73 + 73 = 146	54 + 54 = 108
7 − 4 = 3	8 − 3 = 5	6 − 2 = 4	9 − 3 = 6	6 − 3 = 3

Write the number words for 12, 13, 14, and 15 anywhere on the airplane.

twelve | thirteen | fourteen | fifteen



Fill in the missing odd numbers.

1 3 5 7 9

In the year 2020, the airplane shown below, the Lockheed SR-71 Blackbird, was the fastest jet aircraft in the world. Knowing that the average commercial plane flies around 575 mph, circle your guess for about how fast the SR-71 Blackbird jet flies:

1,000 Answers will vary. 2,100 mph

Complete each problem below, and then write each circled digit on the lines at the bottom of the page in order to see how fast the Lockheed can go. Was your guess correct?

71 + 61 = 132	14 + 5 = 19	70 + 20 = 90	60 + 20 = 80

2 , 1 0 0 mph

Figure out the skip counting patterns and fill in the blanks.

100, 150, 200, 250, 300, 350

25, 50, 75, 100, 125, 150, 175

Lesson 14

CALENDAR WORK: PART 1

Even Numbers

- Have the child tell you what every even number ends with. [0, 2, 4, 6, 8]
- Have the child skip count by even numbers from 112 to 130.

Skip Counting

Have the child skip count by 3s from 3 to 30 two times. If needed, have him or her use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

How many days are in each month? It's clear!
February has 28, but 29 each leap year.
Thirty days are in September,
April, June, and November.
The rest have 31.
The rest have 31.

○ Note: It is expected that children can name the months of the year in order. If they cannot, consider watching the video "Months of the Year" on The Good and the Beautiful Kids YouTube channel daily until the months are mastered.

Read to the child: Each of the twelve months of the year is unique. They have different names, they are in different seasons, and they have a different number of days. The length of each month is based on the cycle of the moon.

○ Practice the poem in the next column several times. Then have the child write the number of days each month has in this manner: You read the words in purple on the poem, and the child fills in the purple month. You read the words in blue on the poem, and the child fills in the blue months, and so on.

○ Read to the child: Every fourth year is called a leap year because one extra day is added to February, giving it 29 days instead of 28. When someone is born on a leap day, they have a birthday only every four years. However, many who are born on a leap day still celebrate their birthday every year on the last day of February or the first day of March. Below are three children who were born on a leap day. To determine how many birthdays each child has had since the year they were born, we will circle each leap year. Remember that a leap year occurs only every four years. Then write the number of circled years on the cake for that person.

Rachel

2008 2009 2010
2011 2012 2013
2014 2015 2016

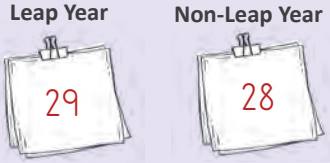
Marco

2000 2001 2002 2003
2004 2005 2006 2007
2008 2009 2010 2011
2012 2013 2014 2015

Caleb

1992 1993 1994 1995
1996 1997 1998 1999 2000
2001 2002 2003 2004 2005
2006 2007 2008 2009 2010
2011 2012 2013 2014 2015

○ Have the child write the number of days in February in a leap year and in a non-leap year.

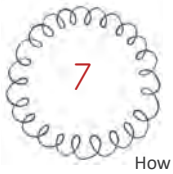


○ Read to the child: Monday through Friday are weekdays. Saturday and Sunday are weekend days. In the table below, color the weekday boxes blue and the weekend boxes yellow.

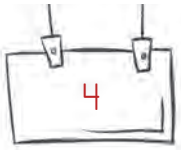
SUN	MON	TUES	WED	THUR	FRI	SAT

○ Have the child fill out the information below.

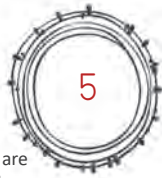
How many days are in a week?



Leap year happens every how many years?



How many days of the week are weekdays?



How many days are in February in a leap year?

How many days of the week are on weekends?

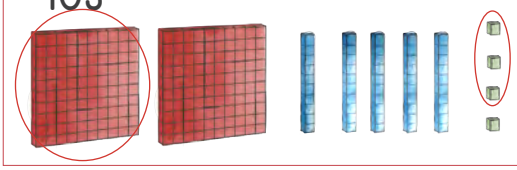
INDEPENDENT REVIEW

Complete each subtraction problem.

87 − 23 = 64	93 − 51 = 42	78 − 43 = 35	89 − 43 = 46	56 − 22 = 34
87 − 52 = 35	97 − 34 = 63	86 − 53 = 33	47 − 22 = 25	89 − 35 = 54

Circle the number of base-10 items needed to represent each number.

103



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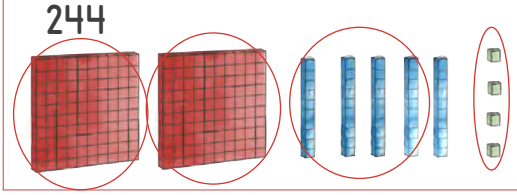


For each number, write how many of each base-10 item is needed to make the number.

560

5 6 0

33

0 3 3

302

3 0 2

912

9 1 2

Lesson 15

CALENDAR WORK: PART 2

Days in Each Month Poem

Have the child practice memorizing the poem. Ask the child which months have 30 days.

How many days are in each month? It's clear!
February has 28, but 29 each leap year.
Thirty days are in September,
April, June, and November.
The rest have 31.
The rest have 31.

Skip Counting

Have the child skip count by 5s from 60 to 110.

- Note: Unit 1 gives an overview of the number of days in all the months but then focuses on memorizing January, February, and March. Future units will focus on other months. Read to the child: Let's review. How many days are in February in a non-leap year? [28] How many days are in February in a leap year? [29] How many days are in January? [31] March? [31]
- Read to the child: Color the days of the weekend yellow.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

- With the child watch the video "How Many Days Are in a Month | Knuckle Mnemonic" on The Good and the Beautiful Kids YouTube channel. This course will not prompt you to watch the video again, but watch it as many times as you want if you find it helpful. In the next column, have the child fill out the number of days in each month by using his or her knuckles to help.

- Read to the child: Let's review. How many days are in February in a non-leap year? [28] How many days are in February in a leap year? [29] How many days are in January? [31] March? [31] What two days of the week are on the weekend? [Saturday and Sunday]

○ Read to the child: Look at the top calendar on this page. Suppose that it is February 1899. The date circled in green is today.

- What is today's date? [February 8, 1899]
- What is tomorrow's date? [February 9, 1899]
- One week from today? [February 15, 1899]
- Two weeks from today? [February 22, 1899]
- Three days from today? [February 11, 1899]

○ Read to the child:

- What day of the week is the last day of February 1899? [Tuesday]
- After the last day of February, what month is it? [March]
- Since Tuesday was the last day of February, what day of the week will be the first day of March? [Wednesday]
- Write the first three days of March on the second calendar.
- Write the last week of March on the second calendar.
- What day of the week does March 1899 end on? [Friday] What day of the week will April 1, 1899, be? [Saturday]
- What is the date circled in green on the March calendar? [March 8, 1899]
- What is the date two weeks from March 8, 1899? [March 22, 1899]

○ Read to the child: Write the number of days each month below has in a non-leap year.

February 1899

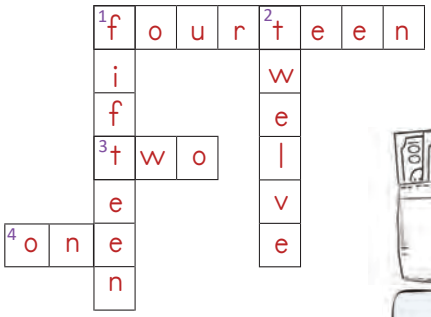
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

March 1899

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

INDEPENDENT REVIEW

Complete the crossword puzzle.



Across
1. The number after 13.
3. 10 – 8
4. The number before 2.

Down
1. 8 + 7
2. 10 + 2

Count each set of bills and write the total amount. Remember to write money with dollar signs like these examples: $200, $350, $205.
Hint: Always count the largest bills first.

For each dollar amount shown, circle the bills you would use to equal the dollar amount. Use the fewest number of bills. Hint: Circle the highest-value bills you can use first.

$82

$155

Complete each subtraction problem.

58 − 23 = 35	97 − 53 = 44	87 − 43 = 44	79 − 46 = 33	95 − 23 = 72
87 − 52 = 35	77 − 43 = 34	96 − 43 = 53	68 − 46 = 22	89 − 37 = 52

Lesson 16

DOUBLES ADDITION PLUS 1

Time

- With the clock from the math box, have the child set the clock to the following times:

half past 2 | 3:25 | 4:55 | 6:30 | 6:45 | half past 9

- Have the child point to the quarters of the clock and say the minutes 15, 30, 45, 00.

Read to the child: You have been memorizing doubles addition—when two of the same number are added together, like 4 + 4 and 8 + 8. Memorizing these math facts makes solving a problem like 9 + 9 a lot faster than counting up by ones from 9.

Today you are going to learn doubles addition plus one. Look at the doubles addition problem in purple. What is the answer to the problem? [8] Now look at the problem in blue. It is not doubles addition; it is doubles addition plus one. The number 5 is one more than 4, so instead of adding 5 + 4, you can add 4 + 4 and then add one more.

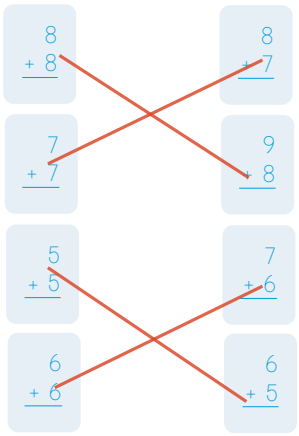
4 + 4 = 8 the same as 5 + 4 = 5 (4 + 1)

Fill in the gray boxes for the problems:

8 + 8 = 16	9 + 8 = 17	(8 + 1)
7 + 7 = 14	8 + 7 = 15	(7 + 1)

5 + 5 = 10	6 + 5 = 11	(5 + 1)
6 + 6 = 12	7 + 6 = 13	(6 + 1)
3 + 3 = 6	4 + 3 = 7	(3 + 1)
9 + 9 = 18	10 + 9 = 19	(9 + 1)

Read to the child: Draw a line from each problem in the right column to the doubles addition problem in the left column you would use to help complete it.



Have the child circle the addition problems that are doubles addition plus one.

That's My Apple Tree

Read to the child: The addition problem below each apple tree shows how many apples are on each tree. It would be a lot faster to calculate how many apples are on the tree by doing a doubles addition plus one problem than to count all the individual apples. Let's play a game called "That's My Apple Tree."

1. On a piece of paper, you write down one of these numbers in purple and don't let me see it: 3, 7, 9, 11, 13, 15, 17, 19.
2. I will point to a doubles addition plus one problem, and you complete it aloud. If the answer does not match the number you wrote down, I will point to another problem. If the answer matches the number you wrote down, say, "That's my apple tree!" The game is over when I find your apple tree. Repeat the game as many times as desired.

8 + 9 17

7 + 8 15

5 + 6 11

4 + 5 9

9 + 10 19

3 + 4 7

6 + 7 13

1 + 2 3

INDEPENDENT REVIEW

Using the January calendar, answer the questions below.

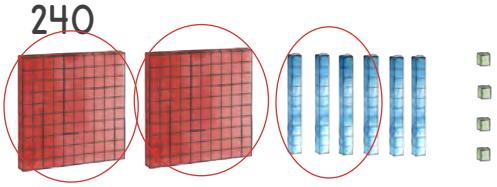
January 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

1. Write the date that is circled in green. January 16, 2024
2. Write the date one week from the date circled in green. January 23, 2024
3. Circle the day of the week February 1 will be.
   Sunday Monday Tuesday Wednesday **Thursday** Friday Saturday

Circle the number of base-10 items needed to represent each number.

240



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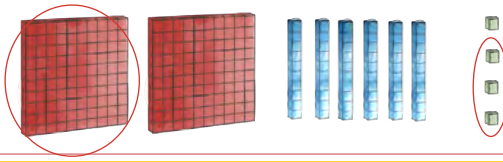


Write the number of days each month has in a non-leap year.

Write a number that has these things:
- 9 in the ones place
- 3 in the tens place
- 1 in the hundreds place

139

Write a number that has these things:
- 2 in the ones place
- 8 in the tens place
- 5 in the hundreds place

582

Lesson 17

TIME: PART 2

Days in Each Month Poem

Have the child practice memorizing the poem. Ask the child how many days are in January, March, May, and June.

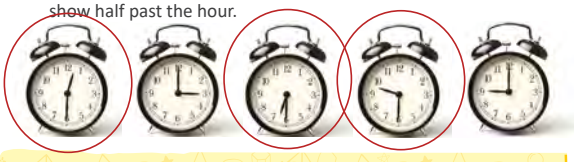
How many days are in each month? It's clear!
February has 28, but 29 each leap year.
Thirty days are in September,
April, June, and November.
The rest have 31.
The rest have 31.

Skip Counting

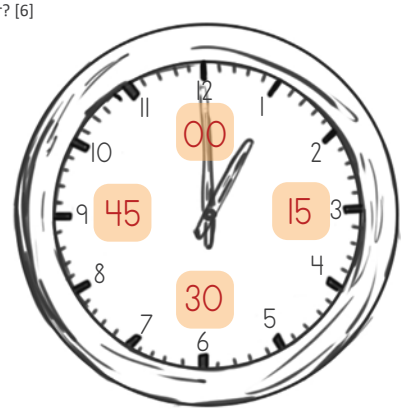
Have the child skip count by 3s from 3 to 18 two times. If needed, have him or her use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

○ Read to the child: When referring to passing time, we often use the phrases "half hour" and "half past." For example, your mother might ask you to come home in a half hour or to be home at half past 6. How many minutes are in one hour? [60] How many minutes are in a half hour? [30] Half past 6 is the same thing as 6:30. Half past 1 is the same thing as 1:30. Circle the clocks that show half past the hour.



○ Read to the child: Let's review the quarters of the clock. Write 00, 15, 30, and 45 in the orange squares; this is skip counting by 15s. What number is the minute hand on when it is 45 minutes past the hour? [9] What number is the minute hand on when it is 15 minutes past the hour, or a quarter after the hour? [3] What number is the minute hand on when it is 30 minutes past the hour, or half past the hour? [6]



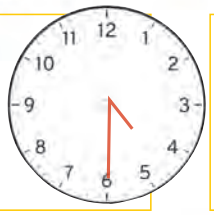
○ Have the child use the clock from the math box to show you the following times:

- 2:05
- half past 3
- 7:15
- 12:55
- half past 9
- 5:10
- 10:25
- 9:45

Read to the child: The Larson family is planning a fall festival to raise money for a family in need. Draw the hands on the clock to show the time of each event.

Hayride

A hayride will take place right when the event opens at half past 4:00.

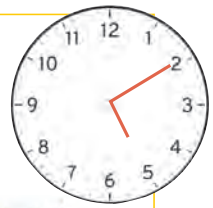


Pumpkin Bowling

Pumpkin bowling will begin at 4:45.

Candy Cannon

The candy cannon will only happen once. It will blast off 10 minutes after 5:00.



Pie Judging Contest

See who baked the tastiest pie! This event starts at half past 5:00.

Corn Maze

The corn maze will open at 5:45. Hurry before it gets dark and even harder to find your way through the maze!

Stunt Dog Show

The dog show will start 20 minutes after 6:00.

INDEPENDENT REVIEW

Complete each problem, filling in the gray boxes.

5 + 5 = 10	6 + 5 = 11 (5 + 1)	6 + 6 = 12	7 + 6 = 13 (6 + 1)
3 + 3 = 6	4 + 3 = 7 (3 + 1)	9 + 9 = 18	10 + 9 = 19 (9 + 1)
8 + 8 = 16	9 + 8 = 17 (8 + 1)	7 + 7 = 14	8 + 7 = 15 (7 + 1)

Complete each subtraction problem.

85 − 23 = 62	83 − 51 = 32	97 − 43 = 54	48 − 43 = 5	57 − 22 = 35
77 − 53 = 24	95 − 32 = 63	78 − 53 = 25	78 − 34 = 44	99 − 35 = 64

Write and complete the problems for the stories.

Julie was the judge for the scarecrow contest at the fall festival. There were 100 entries by adults and 50 entries by children. How many entries were there total?

100 + 50 = 150

Dave bought 13 caramel apples, and then he bought 5 more. How many caramel apples did he buy?

13 + 5 = 18

Write your birthday including the month, day, and year in the box.

Answers will vary.

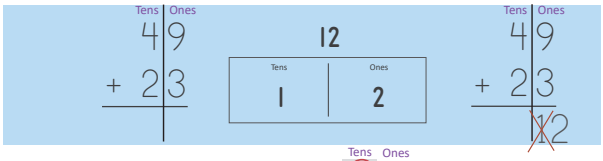
Lesson 18

ADDING TWO-DIGIT NUMBERS WITH REGROUPING

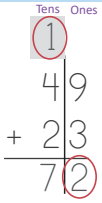
Place Value

- Write "807" on the whiteboard and have the child point to the digit in the tens place [0], ones place [7], and hundreds place [8].
- Have the child write "517" on the whiteboard and tell you what digit is in the hundreds place [5], tens place [1], and ones place [7].

○ Read to the child, pointing to items on the page as you discuss them: Look at the addition problem 49 + 23 below. Let's start with the ones place. What is 9 + 3? [12] Now look at the chart for the number 12. The 1 goes in the tens place, and the 2 goes in the ones place. We cannot write the 1 in the ones column. That's why it's crossed out. Only ones belong in the ones column.



Instead, we write 2 in the ones place and bring the 1 up to the tens column, as shown in the gray box. Then we add 1 + 4 + 2 and write the sum in the tens place as shown here:



○ Have the child complete the problems.

Tens Ones 1 4 8 + 2 4 7 2	Tens Ones 1 4 7 + 4 3 9 0	Tens Ones 1 3 8 + 1 5 5 3
Tens Ones 1 3 6 + 2 6 6 2	Tens Ones 1 4 7 + 1 7 6 4	Tens Ones 1 5 8 + 2 8 8 6
Tens Ones 1 2 9 + 3 5 6 4	Tens Ones 1 1 8 + 1 7 3 5	Tens Ones 1 5 7 + 3 6 9 3

INDEPENDENT REVIEW

For each dollar amount shown, circle the bills you would use to equal the dollar amount. Use the fewest number of bills. Hint: Circle the highest-value bills you can use first.

$172

$10	$20	$1	$1
$50	$100	$20	$20

$146

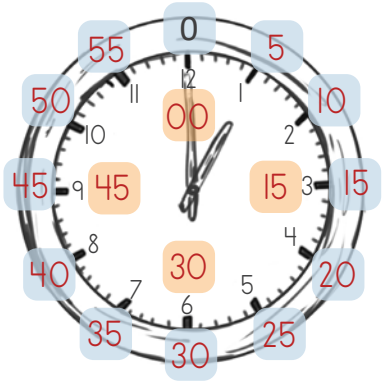
$10	$20	$1	$5
$50	$100	$20	$20

Write and complete the problem for the story.

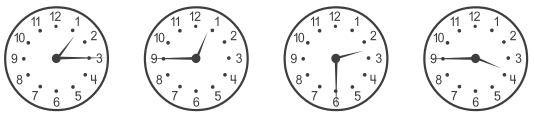
Mr. Black grew 100 cactus plants. He sold 50 of them to a small shop in town. How many plants does he have left?

100 − 50 = 50

In the blue boxes, write the 5-minute increments. In the orange boxes, write the quarters of the clock (00, 15, 30, 45).



Write the times shown on each clock.



1 : 15 | 12 : 45 | 2 : 30 | 3 : 45

Write the number of days each month has in a leap year.

Lesson 19

ORDINAL POSITIONS 1 TO 12

Place Value

- Write "678" on the whiteboard and have the child point to the digit in the tens place [7], ones place [8], and hundreds place [6].
- Have the child write "409" on the whiteboard and tell you what digit is in the hundreds place [4], tens place [0], and ones place [9].

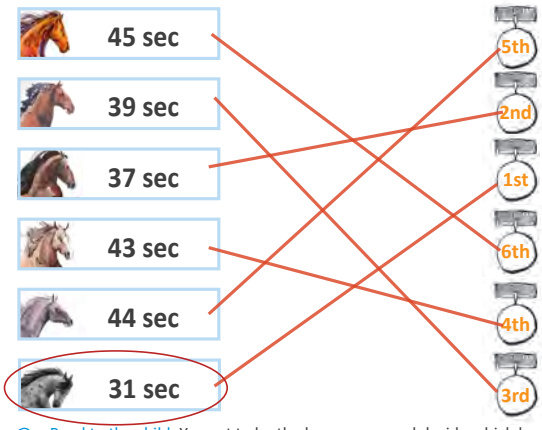
Read to the child: Ordinal numbers refer to the position of objects rather than their amount. For example, "3rd" is an ordinal number. The number 3 means 3 items, but 3rd means something in the 3rd position. Write the ordinal position for the horses and riders in the race below like this: 1st, 2nd, 3rd, 4th, 5th.

1st 2nd 3rd 4th 5th

Read to the child: Although you don't often hear about the people in a competition who get 6th place or greater, all numbers have an ordinal position. Practice saying the ordinal numbers for 6th through 12th. [6th, 7th, 8th, 9th, 10th, 11th, 12th] Practice writing the ordinal numbers for 6th through 12th by copying them in the blank spots on the chart.

6th	7th	8th	9th	10th	11th	12th
6th	7th	8th	9th	10th	11th	12th

Read to the child: Look at the race times below. Circle the horse that crossed the finish line in the fastest amount of time and draw a line from the horse to its ordinal position. The fastest time is in first place, and so on.



Read to the child: You get to be the horse racer and decide which horse you think will be the fastest of this group. Write 7th on the fastest horse in this group and continue through 12th.

INDEPENDENT REVIEW

Complete each problem.

Tens	Ones
1	
2	8
+ 2	8
5	6

Tens	Ones
1	
3	7
+ 2	7
6	4

Tens	Ones
1	
4	6
+ 2	5
7	1

Tens	Ones
1	
3	6
+ 2	6
6	2

Tens	Ones
1	
3	5
+ 1	5
5	0

Tens	Ones
1	
2	8
+ 2	3
5	1

Tens	Ones
1	
3	8
+ 1	4
5	2

Tens	Ones
1	
3	7
+ 2	4
6	1

Write your birthday by including the month, day, and year.

Answers will vary.

Write one of your parents' phone numbers in this format: 429-555-4588.

Answers will vary.

Circle the time shown on each clock.

half past 1 | 6:05 | 1:25

half past 2 | 5:10 | 2:25

4:40 | 3:50 | 10:15

Lesson 20

GREATER THAN, LESS THAN, EQUAL

Time

- With the clock from the math box, have the child set the clock to the following times:

half past 2 | 3:25 | 4:55 | 6:30 | 6:45 | half past 9

- Have the child point to the quarters of the clock and say the minutes: 15, 30, 45, 00.

○ Read to the child, pointing to the pictures you are explaining: Diego loves birds, especially the brown wrens that often visit his yard. He put a pile of seeds on two sides of his picnic table. One pile had 20 seeds, and the other had 5 seeds. He watched as a brown wren landed between the two piles of seeds and ate from the larger pile.

20 Seeds  5 Seeds

Notice how the bird's open beak looks like a greater than symbol: >

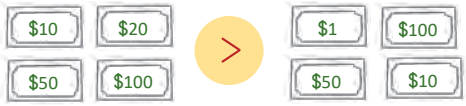
Think of the greater than and less than symbols like a bird's beak that is always going to open up to the greater number of seeds. Point to the symbols as I say their names in order: greater than, less than, equal, not equal.

> < = ≠

○ Have the child place a greater than, less than, or equal sign in each circle.

135 < 200 109 = 109

$19 > $15 $7 < $17



○ Have the child place an equal or not equal sign in each circle.

333 ≠ 353 653 ≠ 635

$15 = $15 $52 ≠ $39

INDEPENDENT REVIEW

Your family is studying birds for science. Your family wants to know which birds are your favorite. Put the birds in order of your favorite by writing the ordinal number as shown here in each circle:

1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th

Answers will vary.

Complete each problem.

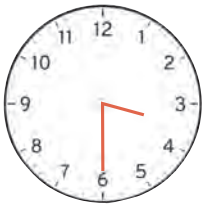
Tens	Ones
1	
2	8
+ 2	8
5	6

Tens	Ones
1	
3	7
+ 2	7
6	4

Tens	Ones
1	
4	6
+ 2	5
7	1

Tens	Ones
1	
4	8
+ 3	4
8	2

Draw hands on each clock to show the time given.



half past 3

6:05

seven-thirty

Lesson 21

DOUBLES IN SUBTRACTION

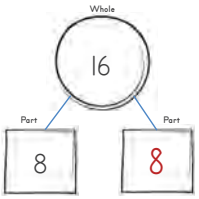
Skip Counting and Counting Backward

- Have the child skip count backward by 10s from 300 to 10.
- Have the child skip count backward by 5s from 30 to 5.
- Have the child count backward by 1s from 90 to 70.

Read to the child: You have learned doubles addition facts. You can use those facts to help with subtraction.

$$\begin{array}{r} 16 \\ -\ 8 \\ \hline \end{array}$$

Look at the subtraction problem in blue: 16 – 8. We could count down from 16 to 8, or we could count up from 8 to 16. A faster way is to ask ourselves this: "Eight plus *what* equals 16?" This concept is also shown in the number bond on this page. We have 16 total. If we break it into parts, with 8 in one part, how many need to be in the other part?



Because you know doubles addition facts, you know that 8 + 8 = 16, so the answer is 8. Have the child complete the following problems using the strategy just learned.

18	14	16	12	10
– 9	– 7	– 8	– 6	– 5
9	7	8	6	5

Have the child circle the subtraction problems in which he or she can use doubles addition facts to help complete the problem.

16 – 8

9 – 4

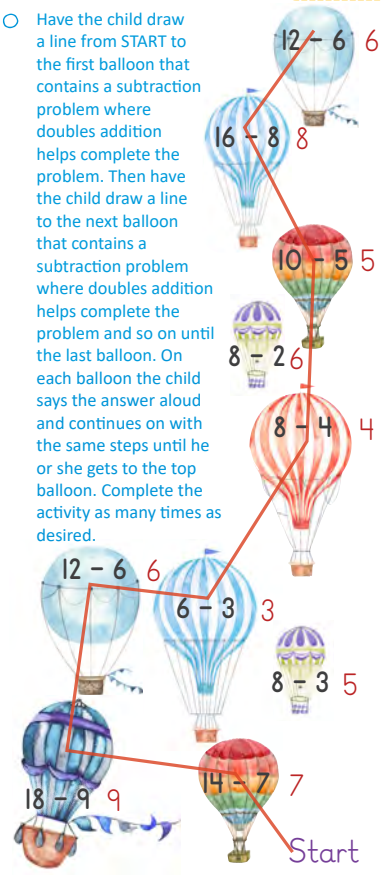
12 – 6

14 – 7

18 – 6

19 – 8

Have the child draw a line from START to the first balloon that contains a subtraction problem where doubles addition helps complete the problem. Then have the child draw a line to the next balloon that contains a subtraction problem where doubles addition helps complete the problem and so on until the last balloon. On each balloon the child says the answer aloud and continues on with the same steps until he or she gets to the top balloon. Complete the activity as many times as desired.



INDEPENDENT REVIEW

Write the number word that represents each set of tally marks.

eleven | twelve | thirteen | fourteen | fifteen

fifteen	𝍸 𝍸 𝍸
eleven	𝍸 𝍸 I
twelve	𝍸 𝍸 II
thirteen	𝍸 𝍸 III
fourteen	𝍸 𝍸 IIII

Write the number of days each month has in a non-leap year.

Complete each problem.

75	63	88	96	57
– 21	– 42	– 33	– 55	– 15
54	21	55	41	42

In each circle write the greater than, less than, or equal sign.

135 < 200 109 < 235

𝍸 𝍸 𝍸 IIII = 𝍸 𝍸 𝍸 IIII

$20 $20 < $50 $10

Write and complete the problem for the story.

Jake rode in a hot-air balloon every day in January. He also rode in a hot-air balloon every day in March. How many days total did he ride in January and March?

(Hint: In subtraction problems you have some and then some are taken away. In addition problems you have some and then you get some more.)

$$\begin{array}{r} 31 \\ +\ 31 \\ \hline 62 \end{array}$$

Lesson 22

CREATING REPEATING PATTERNS AND COLOR PATTERNS

- Have the child count by 25s from 25 to 200.
- Take the clock from the math box and have the child set the clock to the following times:

half past 7 | 3:25 | 4:15 | 9:30 | 6:45 | half past 1

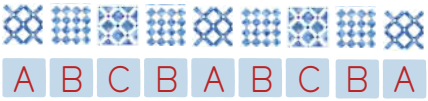
○ Read to the child: When looking at or creating patterns, we can write letters to name the pattern: ABA, ABBA, etc. Each letter represents a unique color or shape. Let's suppose you are helping build a brick wall. You need to determine the pattern so that you can continue it. Write the letters below each pattern, and then write the pattern rule in the purple box at the end. For example, this pattern shows AAB. A is the light brown brick, and B is the dark brown brick. The pattern AAB keeps repeating.

A A B A A B A AAB

A B A B A B A AB

A B B A B B A ABB

○ Read to the child: Imagine you are laying tile and you need to identify the right pattern. Write A, B, or C below each tile in the pattern. Remember, each unique tile has a different letter. Tiles that are the same have the same letter. After writing each label, write the letter pattern in the purple box at the end.



A B C B A B C B A ABCB

○ Have the child create the following patterns down the vertical columns using colors or shapes.

ABA	ABB	AAB
Answers will vary.		

Star LOGIC

Take the stars from the math box and follow the clues to place the stars on the boxes in the right places.

PUZZLE 6

Use 1 light-green star, 1 light-blue star, 1 pink star, and 1 orange star.

Clue 1: The light-green star is in the top row.

Clue 2: The light-blue star is below the light-green star.

Clue 3: The orange star is to the right of the light-blue star.

PUZZLE 7

Use 1 dark-blue star, 1 light-blue star, 1 yellow star, and 1 brown star.

Clue 1: The brown star is not in the bottom row.

Clue 2: The light-blue star is not in the top row.

Clue 3: The yellow star is to the left of the light-blue star and below the dark-blue star.

INDEPENDENT REVIEW

Write and complete the problems for the stories.

John lives in Africa, and his family helps on a wildlife sanctuary. He helps feed the animals. He starts by feeding the 5 elephants. After lunch he feeds the 10 zebras. How many animals did he feed in all? (Hint: In subtraction problems you have some, and then some are taken away. In addition problems you have some, and then you get some more.)

5 + 10 = 15

John saw 15 monkeys today and 5 monkeys yesterday. How many monkeys did he see in total?

15 + 5 = 20

For each dollar amount shown, circle the bills you would use to equal the dollar amount. Use the fewest number of bills. (Hint: Circle the highest-value bills you can use first.)

$151

$76

Complete each problem.

56	74	78	87	36
- 23	- 42	- 33	- 55	- 15
33	32	45	32	21

Write the number of days in each month in a non-leap year.

December	February	March	September	April	May
31	28	31	30	30	31

Lesson 23

COUNTING COINS: PART 1

Skip Counting

- Have the child skip count by 25s from 25 to 300 and backward from 300 to 25.
- Have the child skip count by 10s from 900 to 1,000.
- Have the child skip count by 5s from 900 to 1,000.

Read to the child: Carl loves math. One day he figures out four different ways to group different coins equal to 30 cents and 75 cents. Do the same thing by stacking the coins in the boxes below. After completing each box, take off the stack of coins.

3 dimes	1 quarter 1 nickel
30¢	
1 quarter 5 pennies	6 nickels

3 quarters	2 quarters 5 nickels
75¢	
2 quarters 2 dimes 1 nickel	2 quarters 2 dimes 5 pennies

Give the child five of each coin: quarter, dime, nickel, and penny. Then have the child tell you the value of each coin. Read to the child: Carl lives in a seaside town close to a beautiful beach. His family owns a shop that sells a variety of things to tourists, including seashells. His mother makes art with the shells and pays Carl for each shell that he finds on the beach for her. Point to each type of coin and say its name and worth. The shells on the beach below are worth different amounts. Below, stack the fewest number of coins equal to the shell's worth in the box above each shell.

INDEPENDENT REVIEW

Write and complete the problem for the story.

Carl found these shells on the beach to sell in his family's shop.

The shells shown below were sold in the shop. How many are left?

7 − 3 = 4

Complete each problem.

8 + 4 = 12	9 + 3 = 12	6 + 3 = 9	8 + 3 = 11
5 + 2 = 7	7 + 4 = 11	9 + 5 = 14	7 + 3 = 10

For each number write how many of each base-10 item is needed to make the number.

817

8 | 1 | 7

53

0 | 5 | 3

209

2 | 0 | 9

468

4 | 6 | 8

INDEPENDENT REVIEW

Complete each problem.

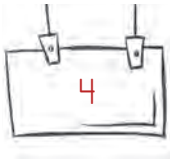
Tens	Ones														
1			1				1			1					
2	8		3	7		4	6		3	6					
+ 2	8		+ 2	7		+ 2	5		+ 2	6					
5	6		6	4		7	1		6	2					
1			1				1			1					
3	5		2	8		3	8		3	7					
+ 1	5		+ 2	3		+ 1	4		+ 2	4					
5	0		5	1		5	2		6	1					

Write the number that answers each question.

How many days are in a week?

7

Leap year happens every how many years?



4

How many days of the week are in a weekend?

2

Write one of your parents' phone numbers.

Answers will vary.

Write your birthday by including the month, day, and year.

Answers will vary.

Lesson 24

DIVIDING GROUPS OF COINS IN HALF

Days in Each Month Poem

Have the child practice memorizing the poem. Ask the child how many days are in January, March, May, and June.

How many days are in each month? It's clear!
February has 28, but 29 each leap year.
Thirty days are in September,
April, June, and November.
The rest have 31.
The rest have 31.

Extra Item
scissors

Skip Counting

Have the child skip count by 3s from 3 to 18 two times. If needed, have him or her use the chart.

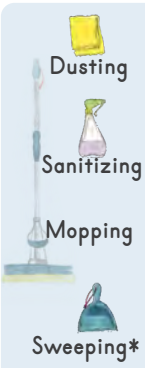
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Read to the child: Carl decided to give half of what he made collecting shells this week to his friend Ron, who needs a new hearing aid. Cut out the boxes of coins on this page. Cut each box into two pieces so there is an equal amount of money on both pieces. Place the new cut pieces in the two boxes below for Carl and his friend. Once divided, add up the totals and write them in each box.

Carl $1.03

Donation $1.03

Give the child five of each coin: penny, nickel, dime, and quarter. Read to the child: Carl's sister Beth wants to give half of her earnings from her cleaning job to help Carl's friend. Each box shows how much she makes from each job. Place the fewest number of coins needed to equal the total in each box. Then divide each group in half and stack half the coins on the donation box. Count her total donation.



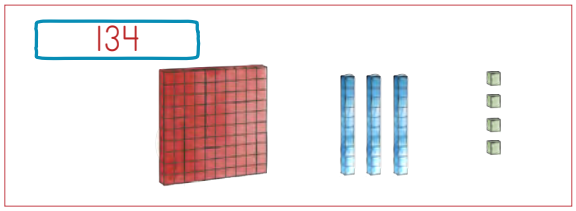
Dusting	50¢ = 2 quarters = 1 quarter + 1 quarter
Sanitizing	20¢ = 2 dimes = 1 dime + 1 dime
Mopping	70¢ = 2 quarters, 2 dimes = 1 quarter, 1 dime + 1 quarter, 1 dime
Sweeping*	22¢ = 4 nickels, 2 pennies = 2 nickels, 1 penny + 2 nickels, 1 penny

*Have the child use nickels and pennies for the last one.

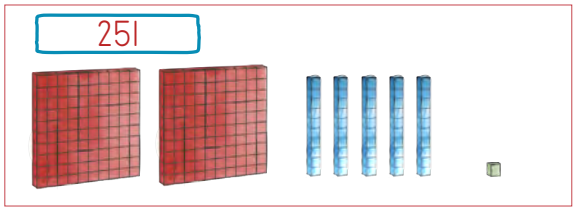
Donation 81¢

INDEPENDENT REVIEW

Write the number represented by the base-10 items.



134



251

This area is blank for double-sided printing and cutting purposes.

Complete each problem.

Tens	Ones
1	
1	6
+ 2	5
4	1

Tens	Ones
1	
1	7
+ 1	8
3	5

Tens	Ones
1	
4	8
+ 2	4
7	2

Tens	Ones
1	
3	9
+ 1	5
5	4

Draw the hands on each clock to show the time given.

half past 5

8:15

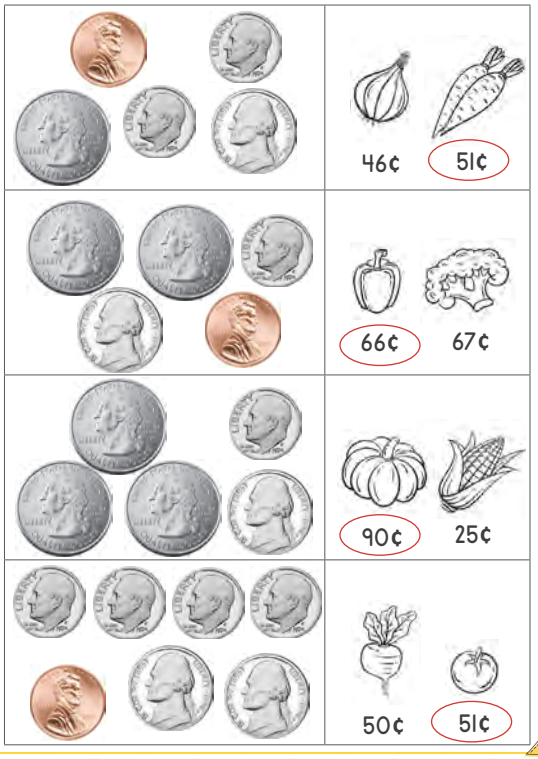
4:45

nine-thirty

Draw a line from each doubles addition problem to its doubles-plus-one match. Then complete all the problems.

8 + 8 = 16	7 + 8 = 15
7 + 7 = 14	8 + 9 = 17
5 + 5 = 10	6 + 7 = 13
6 + 6 = 12	5 + 6 = 11

In the right column, circle the item that has the price shown by the group of coins. Remember when counting groups of coins to count the coins with the highest value first.



- At midnight, which is 12 AM, Eric has already been asleep for 3 hours.
- At 1 AM and 2 AM, Eric is still asleep and is sleeping so soundly that he doesn't even hear the rainstorm that has started. It is very early in the morning.
- At 3 AM, 4 AM, and 5 AM, Eric is still sound asleep. It is very early in the morning.
- At 6 AM it is still mainly dark; the sun is just barely starting to rise, and the rainstorm has passed.
- At 7 AM rays of morning sun are shining through Eric's window. He wakes up and says his morning prayers.
- At 8 AM Eric eats breakfast with his family and then does chores. It is morning.
- From 9 AM to 11 AM, Eric studies. It is still morning.
- At 12 PM, or noon, Eric eats lunch. It is no longer morning; it is afternoon. Move to the bottom clock.
- From 1 PM to 3 PM in the afternoon, Eric practices handwriting, typing, and playing the flute.
- From 3 PM to 5 PM, Eric plays outside with his sister and a neighbor friend. It is still afternoon.
- At 5 PM Eric does chores. It is now evening, and the sun is sinking lower and lower in the sky.
- At 6 PM Eric has dinner. It is evening, and the sun is starting to set.
- From 7 PM to 8 PM, Eric reads. It is still evening.
- At 9 PM Eric goes to bed. It is now night. He snuggles up under his warm quilt and listens to music as he falls asleep.
- At 10 PM and 11 PM, Eric is still asleep. At 12, it is no longer PM. It is now 12 AM, or midnight.

For each clock, have the child write the time shown on the clock, including the AM/PM.

You are sleeping.

4 : 05 AM

You are eating breakfast.

7 : 30 AM

You are helping make lunch.

11 : 00 AM

You are doing homeschool.

1 : 00 PM

You are cleaning up lunch.

12 : 00 PM

It is afternoon.

2 : 50 PM

It is evening.

6 : 45 PM

INDEPENDENT REVIEW

Write the number words.

12	twelve
13	thirteen
14	fourteen
15	fifteen

Complete each problem.

47 - 23 = 24	83 - 51 = 32	68 - 33 = 35	79 - 43 = 36
97 - 52 = 45	57 - 24 = 33	86 - 33 = 53	78 - 34 = 44

Count by 25s to fill in the missing numbers.

25	50	75	100	125

Count by 3s to fill in the missing numbers.

3	6	9	12	15

Count by 50s to fill in the missing numbers.

200	250	300	350	400

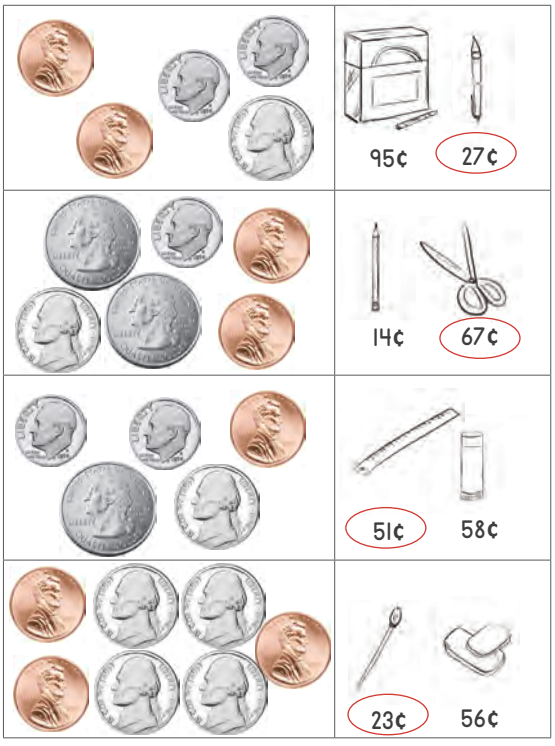
Write and complete the problem for the story.

At his bakery today, Mr. Wood sold 50 cheese pretzels and 50 sweet pretzels.

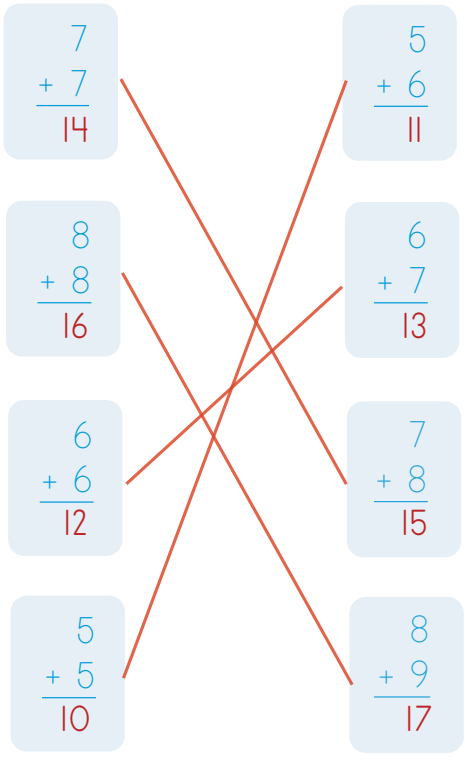
Mr. Wood also sold 10 loaves of his lovely wheat bread. How many items did he sell in total?

50 + 50 + 10 = 110

In the right column, circle the item that has the price shown by the group of coins. Remember when counting groups of coins to count the coins with the highest value first.



Draw a line from each doubles addition problem to its doubles-plus-one match. Then complete all the problems.



Lesson 26

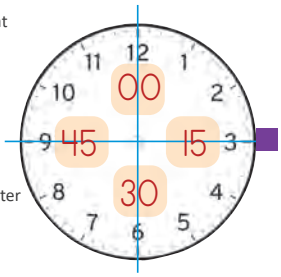
TIME: REVIEW

Time

Ask when a new day starts [12 AM] and what time noon is. [12 PM] Have the child repeat the poem several times.

AM is the morning when birds wake up and sing.
PM is the evening when songbirds go to sleep.

○ Read to the child: Let's review what we have learned about AM and PM and learn about time that is a quarter after the hour. Remember how we can divide a clock into quarters. Write the minutes in the orange boxes. [15, 30, 45, 00]



The purple box shows the first quarter after the hour, which is 15 minutes after the hour. Thus, if we say, "It is quarter after 2," it is 2:15.

○ Take the clock from the math box and give it to the child. Have the child show you the times listed in the boxes below. After he or she shows you each time, read to the child the sentence from the box and have the child tell you if it is AM or PM.

quarter after 12 AM It's just past midnight.	half past 6 PM You're eating dinner.	quarter after 12 PM It's just past noon.
3:30 AM You're sleeping.	quarter after 11 AM You're eating lunch.	quarter after 2 AM You are sleeping.

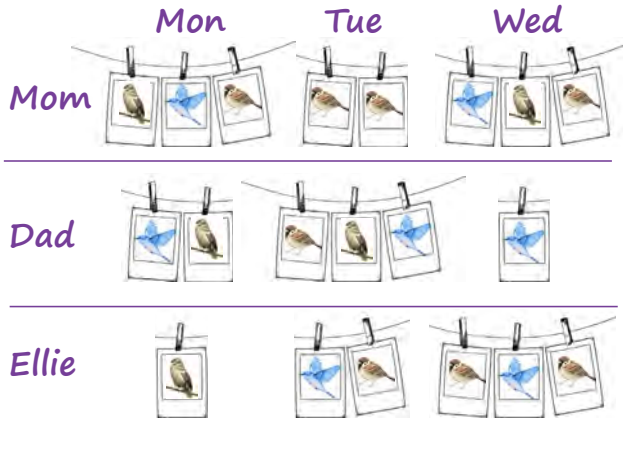
○ Give the child the stars from the math box. Read to the child: The Clark family is camping in the beautiful mountains. For each section below, complete these steps:

1. Next to each star, read what activity the Clark family is doing.
2. Place the matching colored star in the section of the picture on the next page that illustrates the activity the family is doing in the description.
3. In the blank box, write the time listed in the description. Be sure to include AM or PM.

The Clarks eat lunch at noon on a picnic blanket.	12:00 PM
An owl hoots on a branch while the family sleeps. It is midnight.	12:00 AM
A bird sings a song with the sunrise. It is quarter after 6:00.	6:15 AM
A squirrel sits on a branch above the family at quarter after 12:00.	12:15 PM
In the morning, the family wakes up. It is half past 7:00.	7:30 AM
It is night, and the family members just got in their tents. Some deer walk by the tents. It is half past 9:00.	9:30 PM

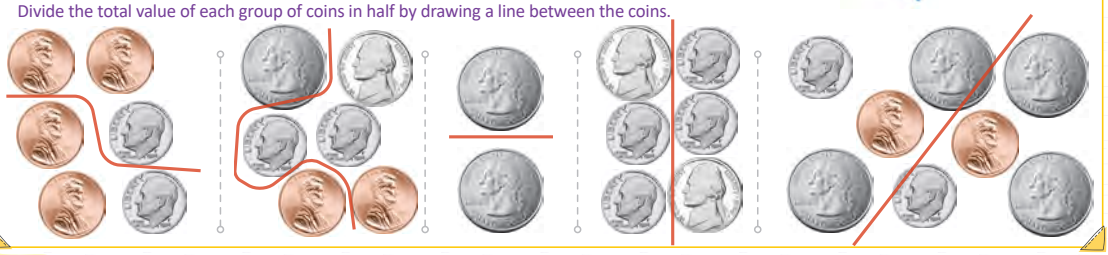
INDEPENDENT REVIEW

The birds that Mom, Dad, and Ellie Clark saw on their campout are shown below. Put an X on the graph each time a bird was seen on their campout. On the graph circle the type of bird that was seen the most.



8			X
7		X	X
6		X	X
5	X	X	X
4	X	X	X
3	X	X	X
2	X	X	X
1	X	X	X

Divide the total value of each group of coins in half by drawing a line between the coins.



Complete each problem.

Tens	Ones
1	
5	9
+ 2	9
8	8

Tens	Ones
1	
5	7
+ 2	7
8	4

Tens	Ones
1	
4	7
+ 4	5
9	2

Tens	Ones
1	
4	6
+ 2	6
7	2

Tens	Ones
1	
3	5
+ 3	5
7	0

Tens	Ones
1	
2	7
+ 2	3
5	0

Tens	Ones
1	
4	8
+ 3	8
8	6

Tens	Ones
1	
2	9
+ 5	9
8	8

Write the number that answers each question.

How many days are in a week?

7

Leap year happens every how many years?

4

How many days are in February during a non-leap year?

28

Write the number of days each month has during a leap year.

January: 31

February: 29

March: 31

Write one of your parents' phone numbers.

Answers will vary.

Lesson 27

TIME: PART 4

Time

Ask when a new day starts [12 AM] and what time noon is. [12 PM] Have the child repeat the poem several times.

AM is the morning when birds wake up and sing.
PM is the evening when songbirds go to sleep.

○ Get a timer or pull up a timer on your phone. Read to the child: There are 60 seconds in a minute. Let's watch a minute go by on the timer and count with it. Count with a timer for a minute. That was one minute. An hour has 60 minutes in it. So, if we sat here and watched a minute go by 60 times, that is how long an hour would take. One day has 24 hours. Look at the picture of the castle garden on the next page. I will tell you about an activity. You will point to the place on the picture where the activity would take place and tell me if it would be more likely to take 2 seconds, 2 minutes, or 2 hours.

- Cut four roses from a rose bush. 2 minutes
- Throw one handful of seeds to the birds. 2 seconds
- Trim all the rose bushes. 2 hours
- Run through the maze. 2 minutes
- Sit on the bench and read a long book. 2 hours
- Have a picnic on the grass and play a long board game. 2 hours
- Put all the food back into the picnic basket and fold the blanket. 2 minutes
- Throw a penny into the fountain. 2 seconds
- Sing one song to the birds. 2 minutes
- Paint a detailed picture of the castle gardens. 2 hours

○ Read to the child: Write the correct number on the crown to complete the problem. Then say the phrase aloud. [1 hour equals 60 minutes, etc.]

1 hour = 60 minutes

1 day = 24 hours

1 minute = 60 seconds

○ Read to the child: How many hours are in one day? [24] Let's suppose you stay at the castle for 2 days. Write and complete a problem to find out how many hours you will spend in the castle in total.

```
  24
+ 24
----
  48
```

○ Read to the child: It takes 2 hours to drive to the castle. Write and complete a problem to find out how many minutes it takes you to drive to the castle.

```
  60
+ 60
----
 120
```


Star LOGIC

Take the stars from the math box and follow the clues to place the stars on the boxes in the right places.

PUZZLE 8

Use 1 dark-green star, 1 orange star, 1 purple star, and 1 red star.

Clue 1: The dark-green star is on the bottom right.

Clue 2: The purple star is on the left.

Clue 3: The red star is to the right of the purple star.

PUZZLE 9

Use 1 light-green star, 1 pink star, 1 light-blue star, and 1 yellow star.

Clue 1: The light-green star is to the left of the pink star.

Clue 2: The pink star is above the yellow star.

INDEPENDENT REVIEW

Write the number word shown by each group of tally marks.

fourteen

fifteen

thirteen

twelve

Complete each addition or subtraction problem.

58 - 23 = 35	74 + 51 = 125	57 - 33 = 24	97 - 43 = 54	64 + 43 = 107	42 + 56 = 98
97 + 42 = 139	67 - 24 = 43	56 + 33 = 89	78 - 34 = 44	93 + 34 = 127	99 - 34 = 65

Write and complete the problem for the story.

The shelter has 50 cats, 50 dogs, and 10 rabbits. How many animals total does the shelter have? (Hint: To complete the problem, skip count by 50s, and then add 10.)

50 + 50 + 10 = 110

Write the number of days each month has in a leap year.

March: 31

February: 29

January: 31

Write the number that answers each question.

How many days are in a week? 7

How many seconds are in a minute? 60

How many minutes are in an hour? 60

How many hours are in a day? 24

How many months are in a year? 12

Lesson 28

CALENDAR WORK: PART 3

Skip Counting

- Have the child skip count by 25s from 25 to 300 and backward from 300 to 25.
- Have the child skip count by 10s from 900 to 1,000.
- Have the child skip count by 5s from 900 to 1,000.

Read to the child: Look at the top calendar on this page. Suppose that it is January 1917. The date circled in green is today.

- What date is it? [January 10, 1917]
- What date is tomorrow? [January 11, 1917]
- One week from today? [January 17, 1917]
- Two weeks from today? [January 24, 1917]
- Three days from today? [January 13, 1917]

Read to the child:

- What day of the week is the last day of January 1917? [Wednesday]
- After the last day of January, what month is it? [February]
- Since Wednesday was the last day of January, what day of the week will be the first day of February? [Thursday]
- Write the first three days of February on the bottom calendar.
- Write the last week of February on the calendar, remembering that February has only 28 days. (1917 was not a leap year.)
- What day of the week does February 1917 end on? [Wednesday] What day of the week will March 1, 1917, be? [Thursday] What is the date circled in green on the February calendar? [February 7, 1917]
- What is the date one month from February 7, 1917? [March 7, 1917]

January 1917

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	(10)	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February 1917

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	(7)	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

INDEPENDENT REVIEW

Write and complete problems for the stories.

James loves making watermelon smoothies. He first has to take the seeds out of the slices. He takes 14 seeds out of 1 slice and 10 seeds out of another slice. How many seeds does he take out total?

	14
+	10
	24

Ellen and her family have a huge cherry tree. Ellen picked cherries for her friends. She put 25 cherries in one bag, 25 cherries in a second bag, and 10 cherries in a third bag. How many cherries did she put in bags in total? (Hint: To complete the problem, skip count by 25s and then add 10.)

25 + 25 + 10 = 60

Count by 3s to fill in the missing numbers.

6	9	12	15	18	21	24

Count by 25s to fill in the missing numbers.

425	450	475	500	525

Count by 100s to fill in the missing numbers.

300	400	500	600	700

It's a cutest dog contest, and you are the judge! Write the place you would give each entry.

1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th

Answers will vary.

Lesson 29

COUNTING COINS: PART 2

Skip Counting

Have the child skip count by 3s from 3 to 18 two times. If needed, have him or her use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

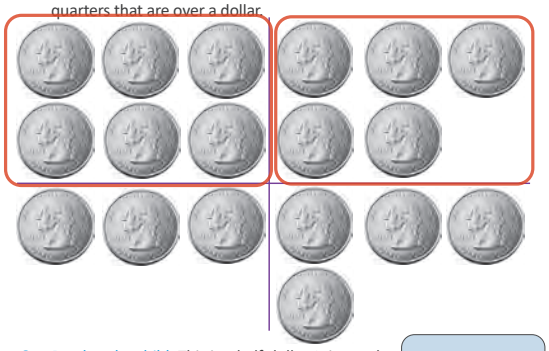
Time

Ask when a new day starts [12 AM] and what time noon is. [12 PM] Have the child repeat the poem several times.

AM is the morning when birds wake up and sing.
PM is the evening when songbirds go to sleep.

○ Give the child four of each of these coins: quarter, dime, nickel, and penny. Read to the child: We are going to practice skills needed to make purchases. Pick an ice-cream cone from below that you want to buy and give the fewest number of coins you can to buy it. Then cross out the cone. Do you have money left over to buy another? Keep buying ice-cream cones until you don't have enough money to buy any more. Tell me how much money you have left over.

○ Read to the child: Four quarters equal a dollar. Circle the groups of quarters that are over a dollar.



○ Read to the child: This is a half-dollar. It is worth 50 cents. How many quarters are equal to a half-dollar? [2] Complete the other conversions below. If needed, count out coins to help you figure out the conversions.

 1 dime = how many nickels? 2

 1 quarter = how many nickels? 5

 1 nickel = how many pennies? 5

 1 half-dollar = how many dimes? 5

INDEPENDENT REVIEW

Complete each problem.

1 37 + 25 62	1 56 + 28 84	1 39 + 24 63	1 68 + 35 103	1 96 + 96 192	1 69 + 36 105

In each circle write the greater than, less than, or equal sign.

35 > 10 + 10 867 > 678

$20 $10 > $20 $5

Write and complete the problem for the story.

Sue painted 32 paintings of turtles this year, but 12 of them were left out in the rain and got ruined. How many paintings were not ruined?

32 − 12 = 20

Write the number that answers each question.

How many days are in a week?	How many seconds are in a minute?	How many minutes are in an hour?	How many hours are in a day?	How many days are in February in a leap year?	How many months are in a year?	How many weekdays are in a week?
7	60	60	24	29	12	5

Lesson 30

ROUNDING TO THE NEAREST 10: PART 1

Time

With the clock from the math box, have the child set the clock to the following times:

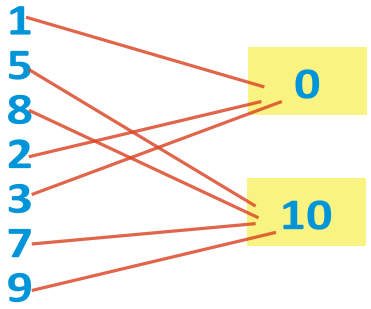
half past 5 | 3:50 | 4:40 | 12:00 | 6:25 | half past 8

Read to the child: When we round, we replace a number with a number that is close in value but easier to add or subtract, like 0 or 10. As raindrops fall on an umbrella, they slide down whichever side they land on. We are going to use this idea to round numbers to the nearest ten. Look at the numbers on the left side of the umbrella. If the number is 1 to 4, you round down to 0. If the number is 5 to 9, you round up to 10. The number 5 is exactly halfway between 0 and 10, so why does it round to 10? That is just the standard chosen so everyone can round the same way. I will say a number, and you point to it on the umbrella and slide your finger down to 0 or 10 and say, for example, "6 rounds to 10" or "2 rounds to 0." Go through all the numbers in random order one or more times.

Read to the child: Determine which way the following numbers would slide and round that number to the nearest ten. Write the rounded numbers in the orange boxes.

6	10	4	0
2	0	8	10
5	10	9	10
3	0	7	10

Read to the child: Draw a line from each number to the box that shows the correct number rounded to the nearest ten.



INDEPENDENT REVIEW

Write and complete the problem for the story.

Sarah earned the following coins by doing chores on Saturday.

She bought a pencil with the coin below. How much does she have left?

60¢ − 10¢ = 50¢

For each dollar amount shown, circle the bills you would use to equal the dollar amount. Use the fewest number of bills. (Hint: Circle the highest-value bills you can use first.)

$177

$10 $20 $1 $1
$50 $100 $5 $20

$56

$10 $20 $1 $5
$50 $100 $20 $5

Complete each problem.

56	73	69	36	88
- 12	- 31	- 23	- 21	- 22
44	42	46	15	66

Draw the time shown on each clock.

half past 7

5:35

quarter after 9

two-thirty

Complete each problem. Then, in each circle, write the greater than, less than, or equal sign.

13		9	10		12
+ 3		+ 2	+ 8		+ 6
16	>	11	18	=	18
19		15	16		18
+ 10		+ 4	+ 3		+ 11
29	>	19	19	<	29

Complete each problem.

18	17	39
- 8	- 4	- 6
10	13	33
17	9	18
- 5	- 3	- 7
12	6	11

Write the word for each number.

13 thirteen
14 fourteen
15 fifteen
12 twelve

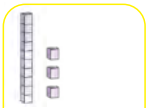
Write and complete the problem for the story.

While camping, Ellie saw these deer before lunch.

She saw the deer shown below after lunch. How many did she see in total while camping?

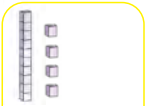
4 + 2 = 6

Write the missing letters for each number.

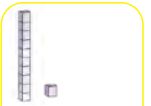


thir teen

fif teen



four teen



eleven

Star LOGIC

Take the stars from the math box and follow the clues to place the stars on the boxes in the right places.

PUZZLE 10

Use 1 light-green star, 1 dark-green star, 1 pink star, and 1 purple star.

Clue 1: The pink star is to the left of the purple star.

Clue 2: The dark-green star is to the left of the light-green star.

Clue 3: The purple star is in the row above the dark-green star.

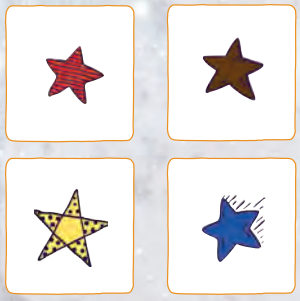
PUZZLE 11

Use 1 yellow star, 1 red star, 1 dark-blue star, and 1 brown star.

Clue 1: The yellow star is below the red star.

Clue 2: The red star is to the left of the brown star.

Clue 3: The dark-blue star is below the brown star.



Lesson 31

DOZEN, HALF DOZEN/ ONE MORE AND ONE LESS

Place Value

Write "753" on the whiteboard and have the child point to the number in the tens place, [5] ones place, [3] and hundreds place. [7]

Time

Ask the child how many seconds are in a minute, [60] how many minutes are in an hour, [60] and how many hours are in a day. [24]

○ Read to the child: Have you ever heard the phrase "a dozen doughnuts"? How many doughnuts do you have if you have a dozen? [12] Bakers especially use the phrase dozen and generally sell their tasty creations by the dozen or half dozen. If a dozen is 12, how many is a half dozen? [6] Look at Betty's Bakery on the next page. It has displays of tasty treats. Circle in red the treat with a dozen items in its display and in green the treats with a half dozen items.

The blue boxes below have the total number of items Betty baked in one week. Write the number that is one less on the left and the number that is one more on the right.

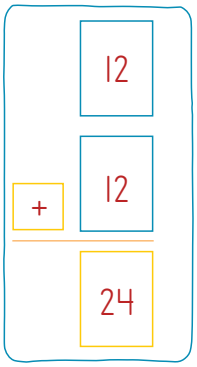
188	189	190

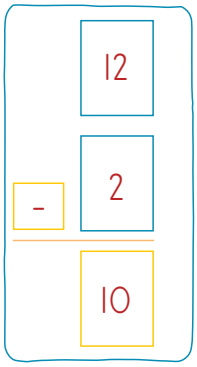
266	267	268

57	58	59

331	332	333

○ Read to the child: The baker has a customer who would like to order two dozen cookies. Write the amount in a dozen in each blue box to the right and add them together to find out how many are in two dozen.





○ Read to the child: The baker has baked a dozen loaves of bread and has sold two loaves. Use this information to create a problem in the boxes to the left and find out how many loaves she still has remaining.

○ Read to the child: Before the sun rises, at 5:00, the baker gets up and starts baking. She needs to have her tasty creations ready before the store opens at 10:00. Use this information to answer the following questions aloud.

- Did the baker begin baking at 5:00 AM or PM? [AM]
- Did the store open at 10:00 AM or PM? [AM]
- Do you think it is more likely that bread bakes for 1 minute or 1 hour? [1 hour]
- Is it more likely that it takes 1 minute or 1 hour to eat a cookie? [1 minute]
- The store closes at 8:00. Is it AM or PM? [PM]
- The busiest time at the bakery is lunchtime. Is it noon or midnight? [noon]

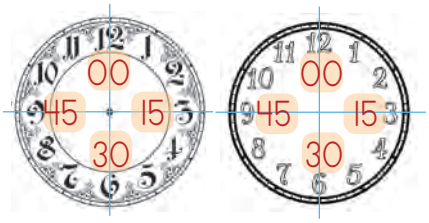
INDEPENDENT REVIEW

Color or circle the item that is in the given position, starting from the left.

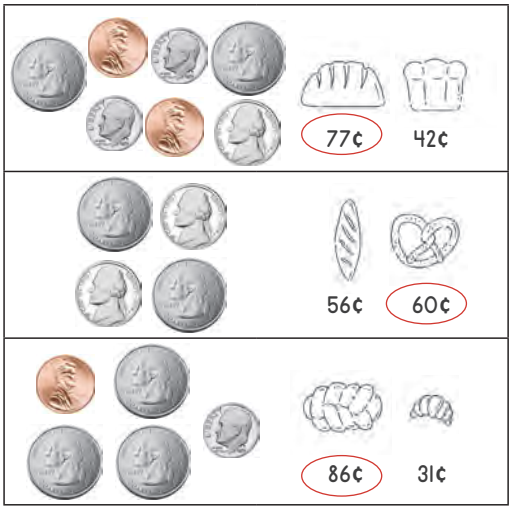
6th

9th

In the orange boxes, write the quarters of the clock: 15, 30, 45, and 00.



In each box color or circle the item that has the price shown by the group of coins. Remember when counting groups of coins to count the coins with the highest value first.



Round each number to the nearest ten.

2	0	3	0	1	0
5	10	4	0	9	10
8	10				

Complete each problem. Don't forget to carry the 1.

46 + 36 = 82	58 + 38 = 96	69 + 29 = 98	35 + 46 = 81	57 + 24 = 81

LESSONS 32-33

UNIT ASSESSMENT

Parent/Teacher

Read the following information aloud to the child: Unit assessments give you practice with the math concepts learned in this unit without over practicing concepts that you have mastered. These assessments also give you practice working on math problems for an extended period of time. This helps you extend focus and attention span and to be better prepared for any type of testing you will have to do in the future. Here are some tips. First, make sure to always read the instructions carefully. Sometimes you can get answers wrong simply because you did not understand the instructions. Second, do not rush through exercises you think you already know. Instead, make sure to do your work carefully. Sometimes you can get answers wrong, even though you understand the concept, just because you rushed.

For Lesson 32 have the child complete all the exercises with purple headers only. At this level you may need to read all or some of the instructions to the child. Correct the work. If the child makes one or more mistakes in a section, explain the concept and check the orange "Additional Practice" checkbox for that section.

For Lesson 33 have the child complete all the orange sections **that are checked**. If the child still makes multiple mistakes, make sure the child understands why. All the principles will be reviewed again in upcoming units. If the child has only a few or no orange sections to practice, the child may spend time doing math games or move on to the next lesson.

Note: All concepts in Unit 1 will be reviewed throughout the rest of the course, but less frequently.

Student

SKIP COUNTING

Figure out what number each row is skip counting by and fill in the missing numbers.

3	6	9	12	15	18	21
10	20	30	40	50	60	70
25	50	75	100	125	150	
50	100	150	200	250	300	

Additional Practice

Skip count by the first number shown, filling in the blank lines.

3, 6, 9, 12, 15, 18, 21

10, 20, 30, 40, 50

25, 50, 75, 100, 125

50, 100, 150, 200, 250

SPELLING 12, 13, 14, AND 15/TALLY MARKS

With number words write the number of tally marks in each box.

𝍸 𝍸 III	thirteen
𝍸 𝍸 II	twelve
𝍸 𝍸 IIII	fourteen
𝍸 𝍸 𝍸	fifteen

Additional Practice

Write tally marks and the number word that represent each number.

12	𝍸 𝍸 II	twelve
14	𝍸 𝍸 IIII	fourteen
13	𝍸 𝍸 III	thirteen
15	𝍸 𝍸 𝍸	fifteen

BILLS

For each dollar amount shown, circle the bills you would use to equal the dollar amount. Use the fewest number of bills. (Hint: Circle the highest-value bills you can use first.)

$172

$10 $20 $1 $1
$50 $100 $20 $20

$146

$10 $20 $1 $5
$50 $100 $20 $20

Additional Practice

For each dollar amount shown, circle the bills you would use to equal the dollar amount. Use the fewest number of bills. (Hint: Circle the highest-value bills you can use first.)

$131

$10 $20 $1 $1
$50 $100 $20 $20

$185

$10 $20 $1 $5
$50 $100 $20 $20

COINS: PART 1

Write the amount of money shown in each group. Use the cent sign. Remember to count the coins with the highest value first.

66¢

66¢

Additional Practice

Write the correct numbers in the yellow boxes.

1 dime is how many nickels? 2

1 quarter is how many nickels? 5

1 nickel is how many pennies? 5

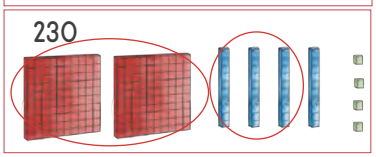
1 half-dollar is how many dimes? 5

PLACE VALUE

Circle the number of base-10 items needed to represent each number.

104

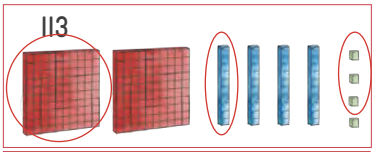
230



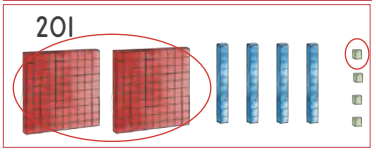
Additional Practice

Circle the number of base-10 items needed to represent each number.

113



201



DOUBLES ADDITION PLUS ONE

Circle the problems that are doubles addition plus one problems and complete them.

9 + 8 = 17	8 + 7 = 15	4 + 8 =	5 + 4 = 9	6 + 3 =	3 + 4 = 7
6 + 8 =	3 + 9 =	7 + 6 = 13	3 + 8 =	5 + 6 = 11	4 + 7 =

Additional Practice

Write the answers to the doubles addition plus one problems.

9 + 8 = 17	8 + 7 = 15	5 + 4 = 9	6 + 5 = 11
10 + 9 = 19	7 + 6 = 13	4 + 3 = 7	2 + 1 = 3

ADDING TWO-DIGIT NUMBERS WITH REGROUPING

Complete the problems.

1 59 + 19 78	1 57 + 57 114	1 47 + 45 92

Additional Practice

Complete the problems. Remember to carry the 1.

1 45 + 15 60	1 56 + 46 102	1 37 + 45 82

SUBTRACTION WITH TWO-DIGIT NUMBERS

Complete the subtraction problems. Remember to start with the ones column.

45 - 23 22	97 - 43 54	89 - 35 54

Additional Practice

Complete the subtraction problems.

65 - 43 22	99 - 43 56	87 - 45 42
78 - 46 32	49 - 23 26	96 - 53 43

CALENDAR WORK: PART 1

Write the number of days each month has in a leap year.

January	February	March
31	29	31

Write the correct number in each shape.

number of days in a week	number of months in a year	number of days of the week that are in a weekend
7	12	2

Additional Practice

Write the number of days each month has in a non-leap year.

February	March	January
28	31	31

Write the answers.

How many days are in a week? 7

How many months are in a year? 12

How many days of the week are in a weekend? 2

CALENDAR WORK: PART 2

Using the calendar, complete the following.

April 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

1. Write the date circled in green.

April 16, 2024

2. Write the date one week after the date circled in green.

April 23, 2024

Additional Practice

Using the calendar above, complete the following.

1. Write the date one week before the date circled in green.

April 9, 2024

2. Write the date one day earlier than the date circled in green.

April 15, 2024

TIME

Circle the time shown on each clock.

1:20
quarter after 1
3:15
quarter after 3

12:45
9:05
half past 1
12:50

half past 2
3:30
6:10
quarter after 2

quarter after 11
11:10
3:50
half past 11

Additional Practice

Write the time shown on each clock.

4 :30

4 :00

4: 15

Draw hands on the clock to show quarter after 6.

ORDINAL POSITION

Color the fish that is in the given position, starting from the left.

3rd

5th

7th

10th

Additional Practice

Color the lighthouse that is in the given position, starting from the left.

6th

9th

ROUNDING

Round each number to the nearest ten.

3	0	1	0
5	10	8	10

Additional Practice

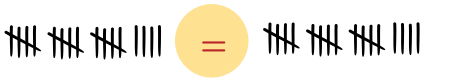
Round each number to the nearest ten.

2	0	9	10
4	0	7	10

GREATER THAN, LESS THAN, EQUAL

In each circle write the greater than, less than, or equal sign.

678 > 67 500 < 678



$20 $20 < $50 $10

Additional Practice

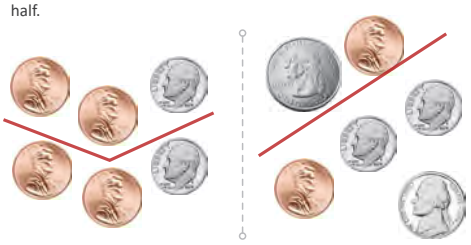
In each circle write the greater than, less than, or equal sign.

567 > 556 300 = 300

$20 $10 < $50 $5

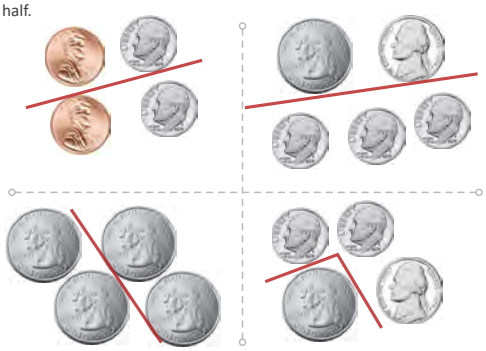
COINS: PART 2

Draw a line between the coins in each group to divide the total value in half.



Additional Practice

Draw a line between the coins in each group to divide the total value in half.



DOUBLES IN SUBTRACTION

Circle the subtraction problems in which you can use doubles addition facts to help complete the problem. Then write the answers to the circled problems.

18 - 8	9 - 4	12 - 6 = 6	14 - 7 = 7
6 - 3 = 3	19 - 9	10 - 5 = 5	8 - 3

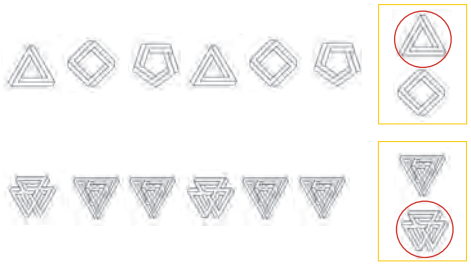
Additional Practice

Circle the subtraction problems in which you can use doubles addition facts to help complete the problem. Then write the answers to the circled problems.

8 - 4 = 4	8 - 3	16 - 8 = 8	5 - 2

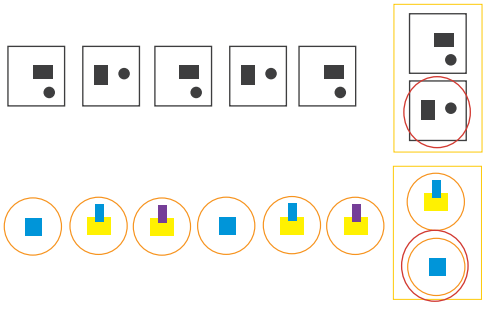
CREATING REPEATED PATTERNS

Circle the design that should come next in the pattern.



Additional Practice

Circle the design that should come next in the pattern.



Lesson 34

ADD AND SUBTRACT 10 AND 100

Spelling 13, 14, 15 & Tally Marks

- Have the child write "thirteen," "fourteen," and "fifteen" on the whiteboard.
- Have the child write 18 tally marks on the whiteboard.

Extra Item
bowl

Read to the child: To add 10 to a number, we *increase* the digit in the tens place by one. The number 784 is on the first chart. Point to the digit in the tens place. [8] In the next chart, write the sum of 784 + 10 by increasing the digit in the tens place by one. [794]

Hundreds	Tens	Ones
7	8	4

Hundreds	Tens	Ones
7	9	4

Read to the child: Add 10 to each number by increasing the digit in the tens place by one.

Hundreds	Tens	Ones
6	4	3

Hundreds	Tens	Ones
6	5	3

Hundreds	Tens	Ones
3	0	5

Hundreds	Tens	Ones
3	1	5

Hundreds	Tens	Ones
	2	9

Hundreds	Tens	Ones
	3	9

Read to the child: To subtract 10 from a number, we *decrease* the digit in the tens place by one. Subtract 10 from each number by decreasing the digit in the tens place by one.

Hundreds	Tens	Ones
5	7	1

Hundreds	Tens	Ones
5	6	1

Hundreds	Tens	Ones
8	9	0

Hundreds	Tens	Ones
8	8	0

Read to the child: To add 100 to a number, we *increase* the digit in the hundreds place by one. Add 100 to each number by increasing the digit in the hundreds place by one.

Hundreds	Tens	Ones
4	2	9

Hundreds	Tens	Ones
5	2	9

Hundreds	Tens	Ones
2	8	6

Hundreds	Tens	Ones
3	8	6

Read to the child: To subtract 100 from a number, we *decrease* the digit in the hundreds place by one. Subtract 100 from each number by decreasing the digit in the hundreds place by one.

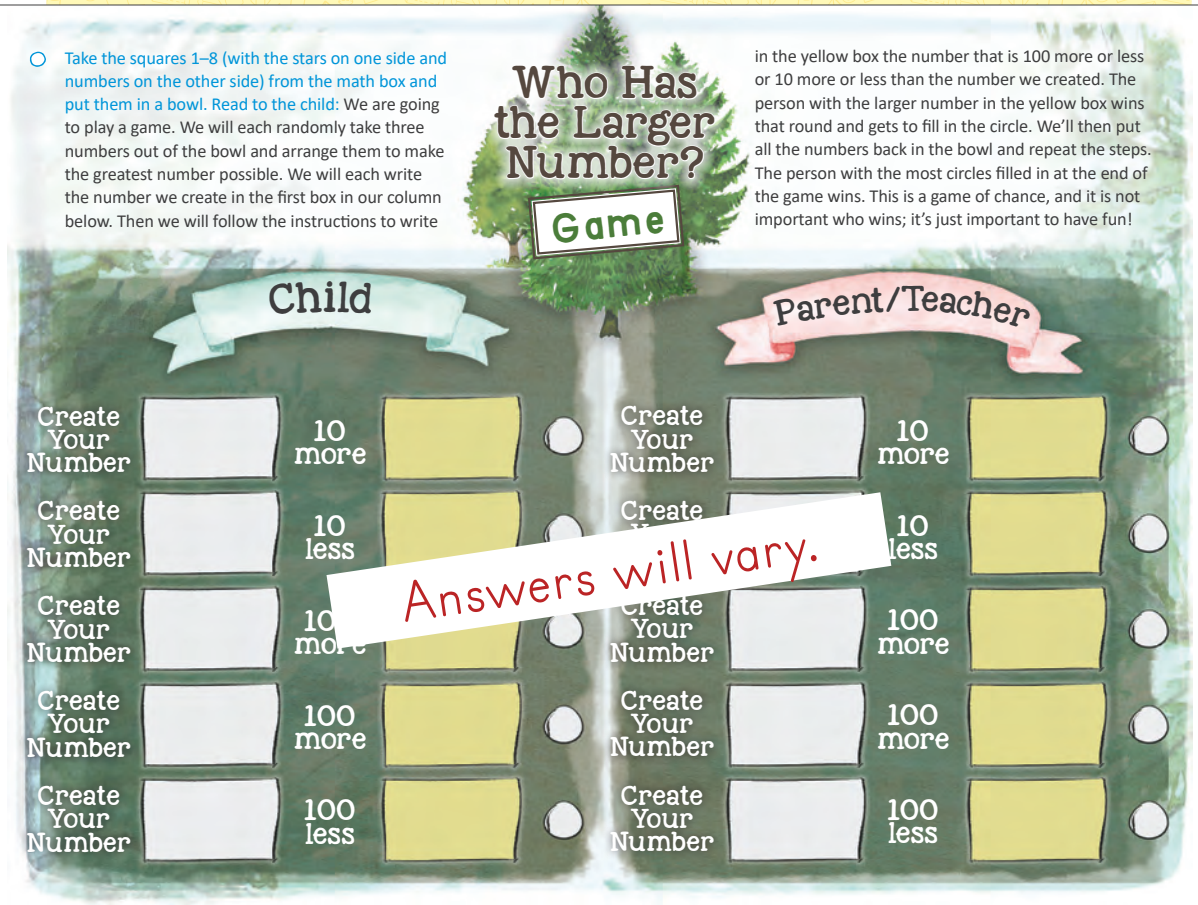
Hundreds	Tens	Ones
5	7	1

Hundreds	Tens	Ones
4	7	1

Hundreds	Tens	Ones
8	9	0

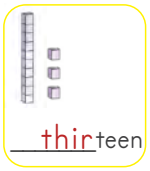
Hundreds	Tens	Ones
7	9	0

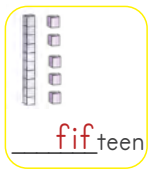
Take the squares 1–8 (with the stars on one side and numbers on the other side) from the math box and put them in a bowl. Read to the child: We are going to play a game. We will each randomly take three numbers out of the bowl and arrange them to make the greatest number possible. We will each write the number we create in the first box in our column below. Then we will follow the instructions to write in the yellow box the number that is 100 more or less or 10 more or less than the number we created. The person with the larger number in the yellow box wins that round and gets to fill in the circle. We'll then put all the numbers back in the bowl and repeat the steps. The person with the most circles filled in at the end of the game wins. This is a game of chance, and it is not important who wins; it's just important to have fun!

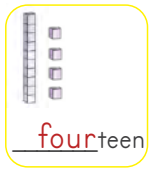


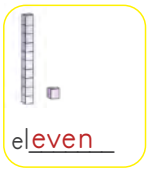
INDEPENDENT REVIEW

Write the missing letters for each number.


thirteen


fifteen


fourteen


eleven

Complete the statements below by writing the number of coins on the right needed to equal the coins on the left.


1 dime = 2 nickels


1 quarter = 5 nickels


1 nickel = 5 pennies


2 quarters = 10 nickels

Find the sums, and then write the correct symbol in each circle: greater than, less than, or equal.

$13 + 3 = 16$ > $9 + 2 = 11$

$19 + 10 = 29$ > $15 + 4 = 19$

$10 + 8 = 18$ = $12 + 6 = 18$

$16 + 3 = 19$ < $18 + 11 = 29$

Use this calendar to fill in the boxes below.

April 2025

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	(15)	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

1. Write the date circled in green.

April 15, 2025

2. Write the date one week from the date circled in green.

April 22, 2025

3. Circle the day of the week that May 1st will be.

Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Lesson 35

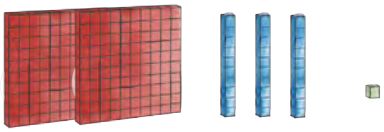
EXPANDED FORM TO THE HUNDREDS

Days in Each Month

If needed, review the video "How Many Days Are in a Month? | Knuckle Mnemonic" and/or work on memorizing the poem on page 63.

○ Read to the child: Let's talk about expanded form. Point to the number in orange and say the number. This way of showing a number is called ***standard form***. **231**

This is how we show 231 by place value with base-10 blocks.

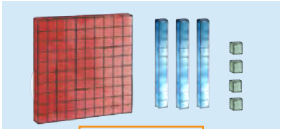


To write the ***expanded form***, we would write out and add up all the place value amounts, like this:

200 + 30 + 1

First, we write the number of individual blocks in the hundred squares. Since we have two squares of one hundred blocks each, we can count by hundreds to see that there are 200 blocks. Then we add the number of individual blocks in the ten sticks. Since we have three sticks of ten, we can count by tens to see there are 30 blocks. Then we add the one block from the ones place. If we add 200 + 30 + 1, what is the answer? [231: the standard form of the number]

○ Have the child write the standard form and then the expanded form for each set of base-10 blocks.



134

100 + 30 + 4

212

200 + 10 + 2

105

100 + 0 + 5

○ Have the child write the expanded form for each number.

Hundreds	Tens	Ones
4	9	7

400 + 90 + 7

Hundreds	Tens	Ones
5	1	4

500 + 10 + 4

○ Take a star from the math box and give it to the child. Read to the child: Owen and Jemma are going on their first hot-air balloon ride. Whose hot-air balloon will reach the top first?

On the next page, put your star at the bottom under Owen's balloon. I will time you as you race to the top. Write the expanded form of the number shown. Once you have written each number correctly, move your star up to the next line. I'll write the time it takes you to reach the top. Then do the same for Jemma's balloon, and we will see who reaches the top first.

RACE the Balloons

Owen — Time: ____

Hundreds	Tens	Ones
7	8	0

700 + 80 + 0 = ____

Hundreds	Tens	Ones
4	5	0

400 + 50 + 0 = ____

Hundreds	Tens	Ones
1	1	1

100 + 10 + 1 = ____

Hundreds	Tens	Ones
6	3	2

600 + 30 + 2 = ____

Jemma — Time: ____

Hundreds	Tens	Ones
2	1	2

200 + 10 + 2 = ____

Hundreds	Tens	Ones
6	9	9

600 + 90 + 9 = ____

Hundreds	Tens	Ones
3	4	3

300 + 40 + 3 = ____

Hundreds	Tens	Ones
1	1	3

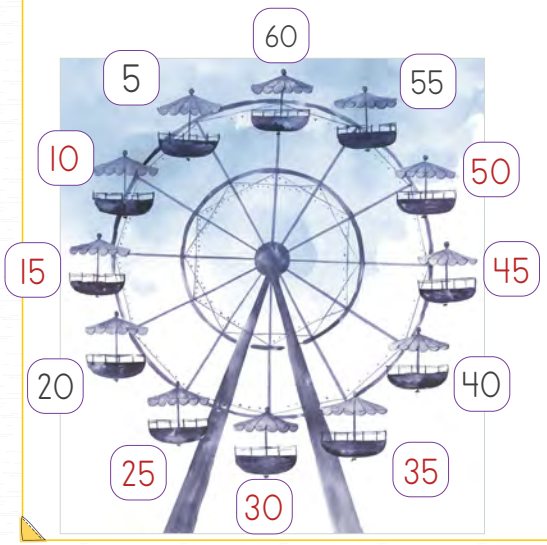
100 + 10 + 3 = ____

INDEPENDENT REVIEW

Skip count by 5s BACKWARD and color in every fifth spot. Hint: When counting by 5s, each number ends with a 0 or a 5.

50	49	48	47	46	45	44	43	42	41
40	39	38	37	36	35	34	33	32	31
30	29	28	27	26	25	24	23	22	21
20	19	18	17	16	15	14	13	12	11
10	9	8	7	6	5	4	3	2	1

Going clockwise, skip count by 5s BACKWARD to fill in the missing numbers. Use the chart above for help if needed.



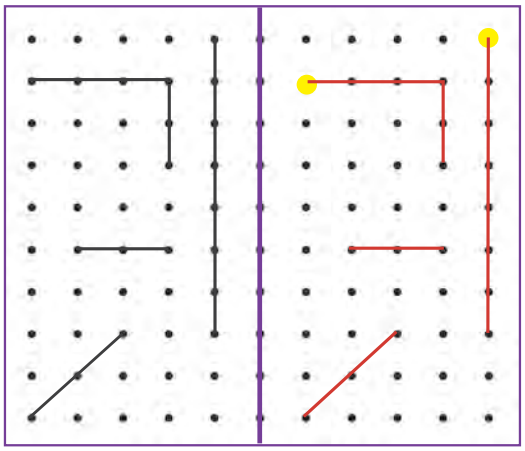
Write the correct operation in the box: a plus or minus sign.

4 + 4 = 8 | 9 − 4 = 5

7 + 8 = 15 | 11 + 4 = 15

7 − 3 = 4 | 12 + 4 = 16

On the right side of the pegboard, copy the lines from the left side. Two of the starting dots are given to you in yellow. Complete those first.



Lesson 36

INCHES, FEET, AND YARDS

Mental Math

Read to the child: An easy way to add 10 to any number is to increase the digit in the tens place by one. Mentally complete the problems in purple. Say the answers aloud.

21 + 10	41 + 10	61 + 10	71 + 10
31	51	71	81

Read to the child: Lily is helping her dad in his woodworking shop. Her dad gives her a 12-inch ruler, a yardstick, and a measuring tape. These are all tools that help measure length.

Look at the ruler on this page. It is the actual length of a 12-inch ruler. Do you see how each of the 12 inches is marked with a number? The longer tick mark between two numbers is the half-inch mark. Have the child point to the half-inch mark between 2 and 3. Lily's dad asks Lily to find a 1-inch nail. To measure an item in inches with a ruler, you place the ruler's edge (or the number 0 if it includes it) at one end of the item. Then you see where the other end of the item lands on the ruler. What is the length of each nail?

Have the child find a few objects around the house that he or she thinks are less than 12 inches long and then measure them to the closest inch.

Read to the child: There are 12 inches is a foot. Do you think a spoon would be more or less than a foot? Do you think you are more or less than one foot tall? What about a mouse? Can you think of an animal that would be longer than a foot? The average baby is 20 inches when he or she is born. Is the average baby more or less than one foot when he or she is born? more

A yard is 36 inches long, which is three feet—about the length of a guitar. A yardstick measures one yard. A yardstick is the length of three 12-inch rulers put together. If you are measuring something that is 6 feet long, would it be faster to use a ruler or a yardstick? [yardstick] It makes sense to measure longer distances with yards. For example, people in the US usually measure football fields in yards. A football field is 100 yards long.

Measuring tapes have varying lengths, but many are at least 60 inches long.

Have the child circle the unit of measurement that would make the most sense to use when measuring the length of each object shown.

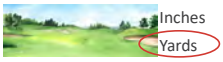
Inches (Feet)

Inches (Feet)

Inches (Feet)

Inches (Feet)

Golf Course



Inches (Yards)

Inches (Feet)

INDEPENDENT REVIEW

Write the number in expanded form in the black boxes.

Hundreds	Tens	Ones
4	9	7

400 + 90 + 7

Hundreds	Tens	Ones
2	1	3

200 + 10 + 3

Hundreds	Tens	Ones
7	0	2

700 + 0 + 2

Hundreds	Tens	Ones
5	6	3

500 + 60 + 3

Hundreds	Tens	Ones
7	2	9

700 + 20 + 9

Write and complete the problem for the story.

Sarah earned the following amount of money by walking a dog.

She bought a pencil with the coins below. How much money does she have left?

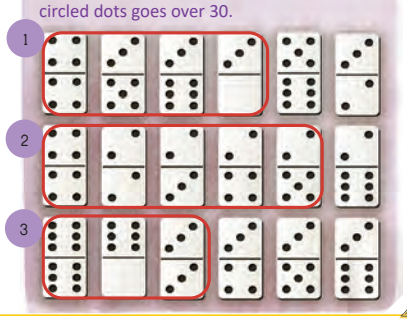
80¢ − 50¢ = 30¢

Complete each problem.

19 − 8 = 11	18 − 4 = 14	29 − 6 = 23
18 − 5 = 13	8 − 3 = 5	59 − 7 = 52

Domino Logic

Go across each row, circling all the domino pieces you can before the total number of circled dots goes over 30.



Lesson 37

COMMUTATIVE PROPERTY/ CHECKING ADDITION WITH SUBTRACTION

Clock Work

Take the clock from the math box and have the child set the clock to the following times:

half past 2 | 3:55 | quarter after 1 | 6:45 | 2:40 | half past 1

Read to the child: Certain things need to be done in a specific order, or they don't turn out the same. For example, you have to put on your socks and then your shoes. What would happen if you changed the order and put on your shoes first and then your socks?

However, with other things we do, the order does not matter. For example, it does not matter if you put on your left shoe or your right shoe first. The result will be the same.

When we add, the order we add the numbers does not matter. However, when subtract, the order matters a lot. Let's take a closer look.

Tell me the answers to these two addition problems: 2 + 1 and 1 + 2. Are the answers the same? Now, let's try subtraction. What is 2 – 1? Let's reverse it. 1 – 2 is negative 1, which is not the same number. We'll talk about negative numbers in a future math course.

Because it does not matter what order we add numbers, it works well to put the larger number on top like the problem in purple. Also notice how there is no digit under the 6. This is because there are 0 tens in the number 2.

$$\begin{array}{r} 67 \\ +\ 2 \\ \hline 69 \end{array}$$

Read to the child: To practice this concept, I am going to tell you some stories aloud, and on the whiteboard you write and complete a problem representing the story. In these addition problems, write the larger number on top, even if it does not come first in the story.

Story Problem
On Tuesday, Teresa planted 3 trees before lunch and 24 trees after lunch. How many total trees did she plant on Tuesday?

What the Child Should Write

$$\begin{array}{r} 24 \\ +\ 3 \\ \hline 27 \end{array}$$

Story Problem
Yesterday the first roses bloomed—6 of them. Today 31 more bloomed. How many total roses have bloomed?

What the Child Should Write

$$\begin{array}{r} 31 \\ +\ 6 \\ \hline 37 \end{array}$$

Read to the child as you point to the parts of the problems you are talking about: Addition and subtraction are opposite operations in math, so you can use one to check the answer of the other one. Look at the problems to the right. If I have 5 + 3 = 8, I can complete the problem 8 – 3 to check my work. The numbers in the green boxes should match. Try the problems in green below. The numbers in the green boxes will be the same if you do the problems correctly. Note: The child is not expected to master this concept until the end of the course.

$$\begin{array}{r} 5 \\ +\ 3 \\ \hline 8 \end{array} \qquad \begin{array}{r} 8 \\ -\ 3 \\ \hline 5 \end{array}$$

Check Your Addition Problems with Subtraction

$$\begin{array}{r} 4 \\ +\ 3 \\ \hline 7 \end{array} \qquad \begin{array}{r} 7 \\ -\ 3 \\ \hline 4 \end{array} \qquad \begin{array}{r} 5 \\ +\ 2 \\ \hline 7 \end{array} \qquad \begin{array}{r} 7 \\ -\ 2 \\ \hline 5 \end{array}$$

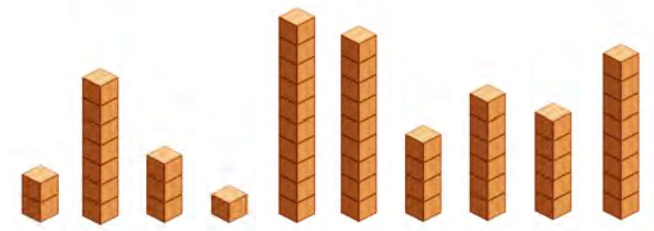
INDEPENDENT REVIEW

Complete each addition or subtraction problem.

$$\begin{array}{r} 69 \\ -\ 23 \\ \hline 46 \end{array} \qquad \begin{array}{r} 85 \\ +\ 51 \\ \hline 136 \end{array} \qquad \begin{array}{r} 67 \\ -\ 33 \\ \hline 34 \end{array} \qquad \begin{array}{r} 88 \\ -\ 43 \\ \hline 45 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1}\,97 \\ +\ 47 \\ \hline 144 \end{array} \qquad \begin{array}{r} 54 \\ -\ 24 \\ \hline 30 \end{array} \qquad \begin{array}{r} {\scriptstyle 1}\,56 \\ +\ 37 \\ \hline 93 \end{array} \qquad \begin{array}{r} 68 \\ -\ 34 \\ \hline 34 \end{array}$$

Order the stacks of blocks from shortest to tallest by writing the following under each box: 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th.



2nd	7th	3rd	1st	10th	9th	4th	6th	5th	8th

Complete the crossword puzzle using number words.

Across
1. The number after 13
4. 9 + 6
7. The double of 6

Down
2. 12 – 8
3. The number after 12
5. 7 + 4
6. The double of 1

		2 f							
1 f	o	u	r	3 t	e	5 e	n		
	u			h		l			
	r			i		e			
				r		v			
	4 f	i	f	t	e	e	n		
	6 t					e		n	
7 t	w	e	l	v	e				
	o				n				

Count the coins. Then circle the item with a price that matches the value of the coins. Remember when counting groups of coins to count the highest value coins first.

Lesson 38

ADDING NUMBERS WITH THREE OR MORE DIGITS

Measurement

Ask the child: How many inches are in a foot? [12] How many feet are in a yard? [3]

Read to the child: The number 15 has two digits, a one and a five. The number 125 has three digits, a one, a two, and a five. When adding numbers with three or more digits, we will start with the ones and then move left. Write the sum below each column.

423 + 353 = 776	345 + 242 = 587	744 + 253 = 997

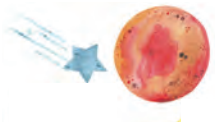
Read to the child: Now try these problems by regrouping or carrying.

1 336 + 356 = 692	1 428 + 538 = 966	1 247 + 247 = 494

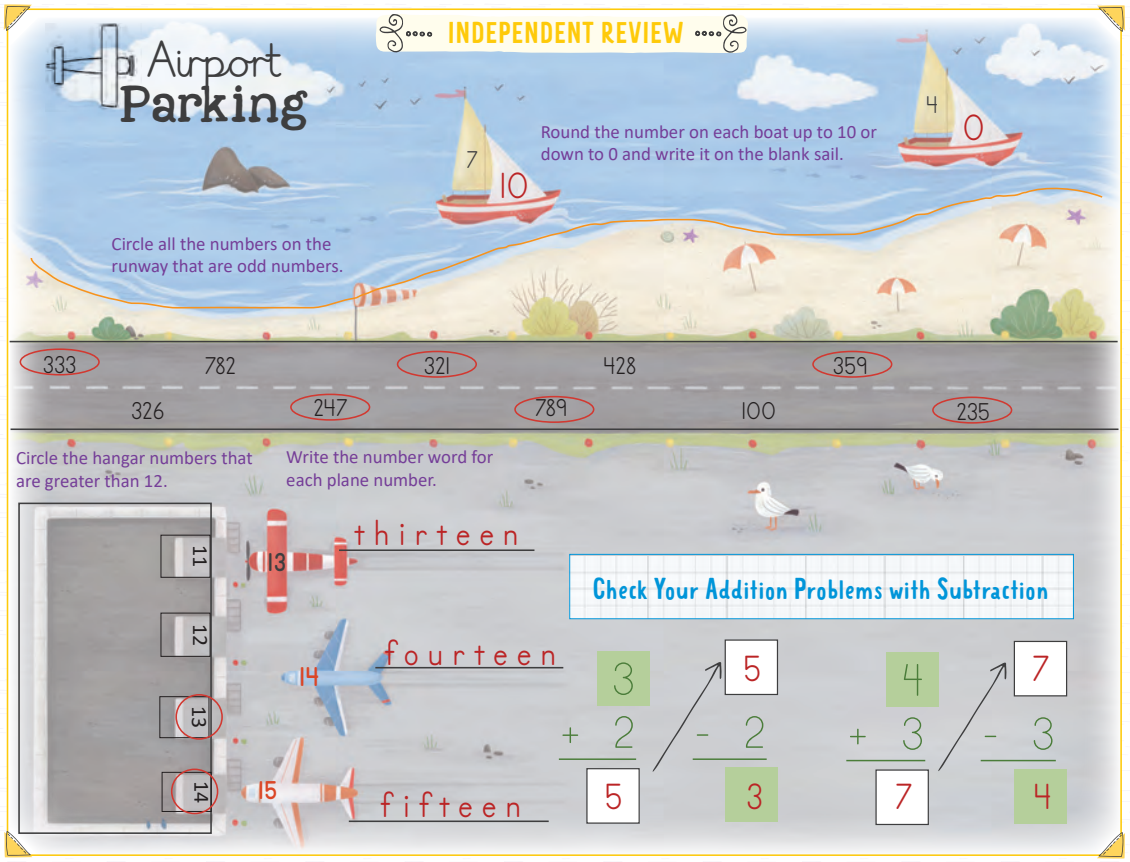
Read to the child: Complete the problems below, which add three-digit numbers with two-digit or one-digit numbers. If there is a blank spot, imagine it is a zero.

423 + 53 = 476	1 537 + 57 = 594	1 548 + 8 = 556

Read to the child: Now you have learned enough to add huge numbers. Here is a fact about a huge number. Mars is over 56 million miles away from us! Try adding these numbers, which are in the millions! Start with the ones column and then go left and continue moving to the next place value to the left until you have added all the digits.



2,352,034 + 3,430,342 = 5,782,376



Lesson 39

TIME: PART 5

Mental Math

Read to the child: An easy way to add 10 to any number is to increase the digit in the tens place by one. Mentally complete the problems in purple. Say the answers aloud.

45 + 10	18 + 10	140 + 10	89 + 10
55	28	150	99

○ Take any airplane from the math box. Read to the child: Elapsed time is the amount of time that has gone by. For example, how long did I sleep? How long does it take to travel that distance? If a plane leaves the airport at 8:00 AM and lands at 10:00 AM, then the flight has taken 2 hours. The time elapsed is 2 hours. Move your airplane along the time line below that shows the 24 hours of the day to determine the elapsed time of the plane flights below. Write the elapsed time in the blue box.

3:00 PM — 2 hours — 5:00 PM

6:00 AM — 3 hours — 9:00 AM

12:00 PM — 4 hours — 4:00 PM

9:00 AM — 2 hours — 11:00 AM

○ Read to the child: Let's talk about elapsed time with hot-air balloons. Given the start and elapsed time, determine what time each hot-air balloon reached its destination.

4:00 PM — 1 hour — 5:00 PM

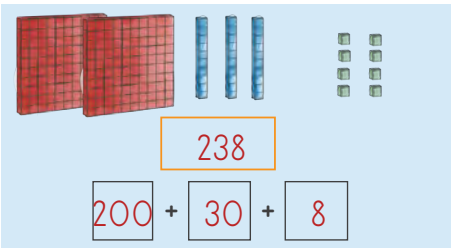
7:00 AM — 2 hours — 9:00 AM

8:00 PM — 2 hours — 10:00 PM

12 AM | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 PM | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 AM

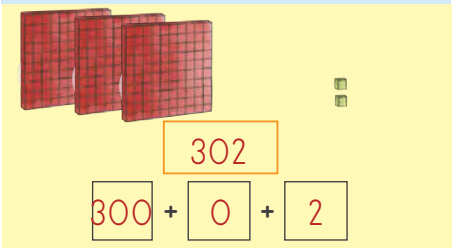
INDEPENDENT REVIEW

Write the standard form of the number in the orange box, and then write the expanded form in the black boxes for each set of base-10 blocks.



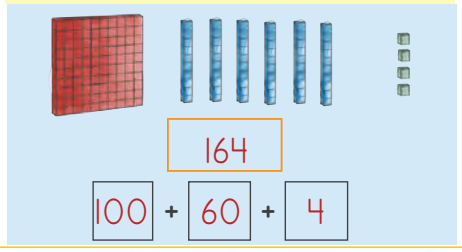
238

200 + 30 + 8



302

300 + 0 + 2



164

100 + 60 + 4

Write the correct operation in the box: a plus or minus sign.

3 + 3 = 6

9 + 4 = 13

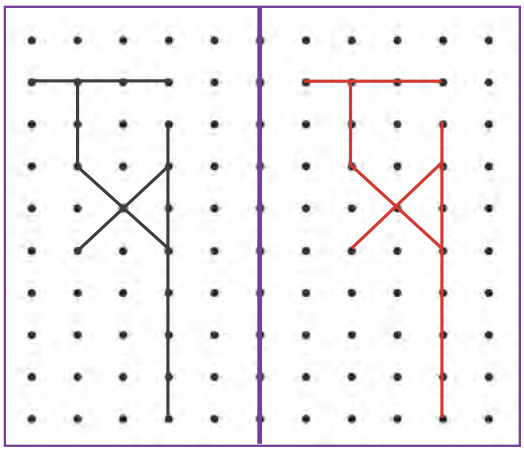
8 − 4 = 4

15 − 2 = 13

7 + 7 = 14

12 − 4 = 8

On the right side of the pegboard, copy the lines from the left side.



Lesson 40

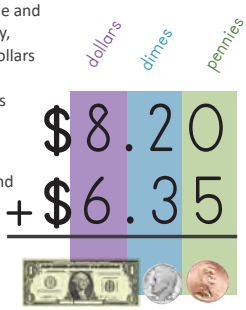
ADDING DOLLARS AND CENTS

Clock Work

Take the clock from the math box and have the child set the clock to the following times:

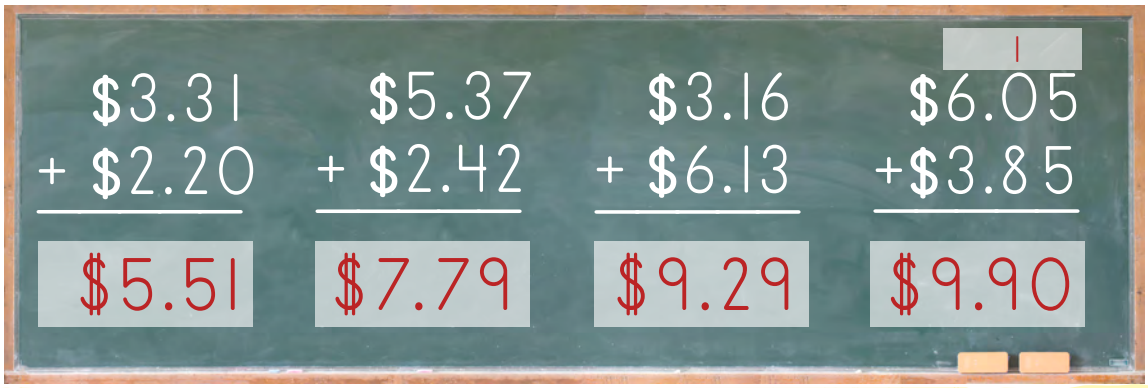
half past 7 | 3:25 | 4:15 | 9:30 | 6:45 | 3:00 | half past 1

Read to the child: Let's learn about adding dollars and cents. Look at the problem in the next column. Point to the green column. This column shows the number of pennies. We call it the hundredths place. It takes 100 pennies to make a dollar. Point to the blue column. This column shows the number of dimes. We call it the tenths place. It takes 10 dimes to make a dollar. Point to the decimal point, which looks like a period. Decimal points mark the space between whole and partial amounts. When adding money, decimal points separate the whole dollars from the partial dollars (cents). Point to the purple column. This is the ones place (dollars).



Look at the first problem on the chalkboard. We need to add $3.31 and $2.20. Start with the hundredths place, then the tenths place, then the ones place. Write the decimal point in your answer right below the decimal points in the problem. Also add a dollar sign to the answer.

Complete all the problems on the chalkboard. Remember to include the decimal point and dollar sign in each answer.



Building Birdhouses

Read to the child: Andrew wants to build a birdhouse, but he only has $6.30 for materials. He needs to know which birdhouse he can build. For each birdhouse he needs wood, nails, paint, and a paintbrush. The price for wood, nails, and birdhouse one and two need different amounts of material.

Andrew has only enough money to build one of the birdhouses. Which one do you think it is? Let's find out if you are right. For each birdhouse first add the cost of the wood and nails. Then add the cost of the paint and paintbrush. Then add the sums (answers) of those two problems to find the total. If Andrew has $6.30 to spend, which birdhouse can he build? One

$1.20 + $0.75 = $1.95

$2.20 + $1.05 = $3.25

$ 1.95 + $ 3.25 = $5.20

$1.98 + $0.95 = $2.93

$3.20 + $1.05 = $4.25

$ 2.93 + $ 4.25 = $7.18

INDEPENDENT REVIEW

Write the number in expanded form in the black boxes. The first one is completed as an example.

Hundreds	Tens	Ones
5	2	4

500 + 20 + 4

Hundreds	Tens	Ones
7	3	8

700 + 30 + 8

Hundreds	Tens	Ones
3	1	9

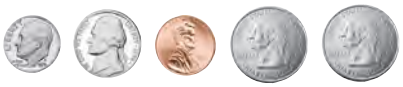
300 + 10 + 9

Hundreds	Tens	Ones
4	6	2

400 + 60 + 2

Write and complete the problem for the story.

Josh earned this amount of money by vacuuming:



He bought a marker with the coins below. How much money does he have left?

66¢ − 40¢ = 26¢

Complete each problem. Then, in each circle, write the correct sign: >, <, or =.

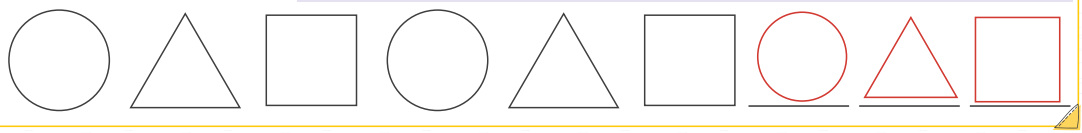
16 + 2 = 18 > 10 + 4 = 14

20 + 11 = 31 > 14 + 3 = 17

17 + 1 = 18 < 15 + 13 = 28

16 + 13 = 29 > 15 + 4 = 19

Complete the pattern.



Lesson 41

TIME: PART 6

Mental Math

Read to the child: Mentally complete the problems in purple. Say the answers aloud.

22 + 10 = 32 44 + 10 = 54 37 + 10 = 47

Read to the child: Sam's grandfather, Mr. Buckley, owns a clock shop full of wonderful and unique clocks. Sam loves to go into the store at noon because the cuckoo clocks sing their songs and the store is filled with fun sounds and cuckoo birds popping out of their cozy nests. The clock is showing the time for noon. Write the time shown on the clock in the box and include AM or PM. Remember, noon is 12 PM.

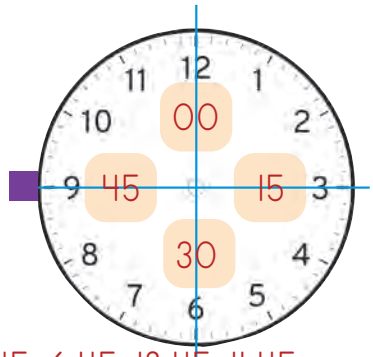
12:00 PM

Read to the child: There is one clock in the shop that sings a special song only at midnight. Sam decides to stay up one night to hear it. The clock is showing the time for midnight. Write the time shown on the clock in the box including AM or PM.

12:00 AM

Read to the child: Remember how we can break a clock into quarters? Write the minutes in the orange boxes. [15, 30, 45, 00]

The purple box shows a quarter TO the hour, which is 15 minutes before the hour. Thus, if we say, "It is a quarter TO 3:00," it is 2:45. What time is a quarter to 4:00, 7:00, 1:00, and 12:00?



3:45, 6:45, 12:45, 11:45

Have the child read the poem below. Then take the clock from the math box and give it to the child. Have the child show you the time for each of the following times. After he or she shows you each time, read the sentence from the box to him or her and have the child tell you if it is AM or PM.

AM starts at midnight and goes to 11:59 AM.
PM starts at noon and goes to 11:59 PM.

quarter to 4
You're sleeping.
3:45 AM

quarter after 12
You're eating lunch.
12:15 PM

quarter to 12
It's just before noon.
11:45 AM

half past 6
You're eating dinner.
6:30 PM

Read to the child: Look at the picture of Sam's grandfather's clock shop on the next page. Point to the clock that is farthest to the left on the page. What are two ways to say the time shown on the clock? [11:15 and quarter past 11] Which clock is your favorite clock in the shop?

INDEPENDENT REVIEW

Complete each problem.

19 − 8 = 11	18 − 4 = 14	29 − 6 = 23
18 − 5 = 13	8 − 3 = 5	59 − 7 = 52
28 − 3 = 25	9 − 3 = 6	58 − 4 = 54

Find the arrival time for the airplane by using the start time in yellow and the elapsed time in blue.

4:00 PM — 1 hour — 5:00 PM

2:00 PM — 2 hours — 4:00 PM

7:00 AM — 3 hours — 10:00 AM

10:00 AM — 2 hours — 12:00 PM

Complete the statements below by writing the number of coins on the right needed to equal the coins on the left.

1 dime = 2 nickels

1 nickel = 5 pennies

1 dime = 10 pennies

1 quarter = 5 nickels

2 dimes = 4 nickels

1 quarter = 25 pennies

Lesson 42

TIME: PART 7

Mental Math

Read to the child: An easy way to add 20 to any number is to increase the digit in the tens place by 2. Mentally complete the problems and say the answers aloud.

22 + 20 = 42	42 + 20 = 62	63 + 20 = 83

○ **Read to the child:** Eliza's piano teacher encouraged Eliza to spend eight hours a week practicing the piano to prepare for her recital. Eliza wrote down below when she started and ended playing the piano for three days. Find the elapsed time of each practice session and write it in the blue box. Use the time line below if needed.

Monday: 4:00 PM — 2 hours — 6:00 PM

Tuesday: 6:00 AM — 2 hours — 8:00 AM

Remember that 1 is after 12.

Wednesday: 12:00 PM — 3 hours — 3:00 PM

○ **Read to the child:** On other days of the week, Eliza set a timer for 30 minutes and wrote down the start time of her practice session. What time did she end? Use the time line as needed.

4:00 PM — 30 minutes — 4:30 PM

7:30 PM — 30 minutes — 8:00 PM

○ **Read to the child:** At times Eliza practiced for one and a half hours, also said as 1 hour and 30 minutes. This means one hour and thirty minutes. In each blue box, write the amount of elapsed time, either 2 hours or 1 hour and 30 minutes.

4:00 PM — 1 hour and 30 minutes — 5:30 PM

7:00 AM — 2 hours — 9:00 AM

2:00 PM — 1 hour and 30 minutes — 3:30 PM

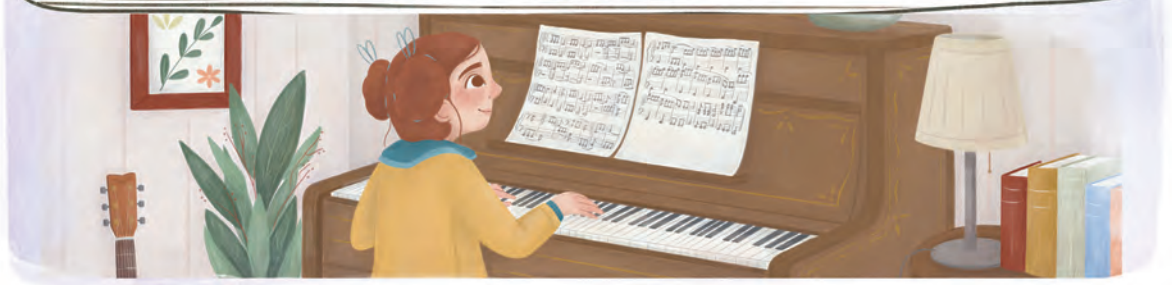
12 AM 1 2 3 4 5 6 7 8 9 10 11 12 PM 1 2 3 4 5 6 7 8 9 10 11 12 AM

12:30 1:30 2:30 3:30 4:30 5:30 6:30 7:30 8:30 9:30 10:30 11:30 12:30 1:30 2:30 3:30 4:30 5:30 6:30 7:30 8:30 9:30 10:30 11:30

Eliza's Practice Book

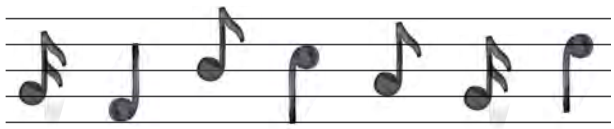
Eliza plays the piano. Write the missing information on her practice book. Make sure to include AM or PM. The first two are completed for you as examples.

Day of the Week	Length of Practice	Time Started	Time Ended
Monday	30 minutes	9:00 AM	9:30 AM
Tuesday	1 hour 30 minutes	8:00 AM	9:30 AM
Wednesday	2 hours	1:00 PM	3:00 PM
Thursday	30 minutes	3:00 PM	3:30 PM
Friday	1 hour 30 minutes	6:00 PM	7:30 PM
Saturday	30 minutes	8:30 AM	9:00 AM



INDEPENDENT REVIEW

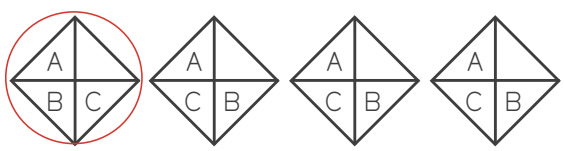
Write the ordinal position of each music note in the box below it: 1st, 2nd, 3rd, 4th, 5th, 6th, 7th.



1st	2nd	3rd	4th	5th	6th	7th

Mark each 6th white key with an x and every 4th black key with a circle.

Circle the one that is different.



Complete each problem.

95 - 42 = 53	75 - 32 = 43	89 - 43 = 46
49 - 24 = 25	77 - 65 = 12	47 - 6 = 41
18 - 5 = 13	67 - 23 = 44	99 - 32 = 67

Write the correct operation in the box: a plus or minus sign.

8 [−] 4 = 4 | 15 [−] 2 = 13

7 [+] 7 = 14 | 12 [−] 4 = 8

Lesson 43

FACT FAMILIES

Skip Counting

Have the child skip count by 3s from 3 to 30 two times. If needed, have the child use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

○ Read to the child: Do you remember what a fact family is? A fact family is a set of four math facts made with the same three numbers. The presents below have numbers on them that can be made into four different math facts. The first one is done for you. Fill in the rest.

9 + 5 = 14

5 + 9 = 14

14 − 9 = 5

14 − 5 = 9

○ Read to the child: On the next column and following page, write the fact families on the houses by using the three numbers at the top to make four different math facts.

INDEPENDENT REVIEW

AM starts at midnight and goes to 11:59 AM.
PM starts at noon and goes to 11:59 PM.

Circle the time shown on each clock, considering the activity Tim is doing.

Tim is sleeping.

quarter past 4 PM

quarter past 4 AM

Tim is eating dinner.

quarter to 6 PM

quarter to 6 AM

Tim is waking up in the morning.

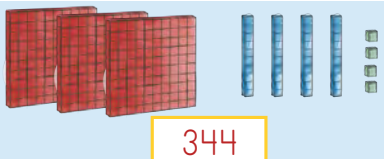
quarter to 7 PM

quarter to 7 AM

Complete each addition or subtraction problem.

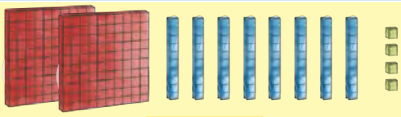
67	243	65	85	66
- 13	+ 431	- 23	+ 43	- 33
54	674	42	128	33

Write the standard form of the number (in the orange box) and then the expanded form (in the black boxes) for each set of base-10 blocks.



344

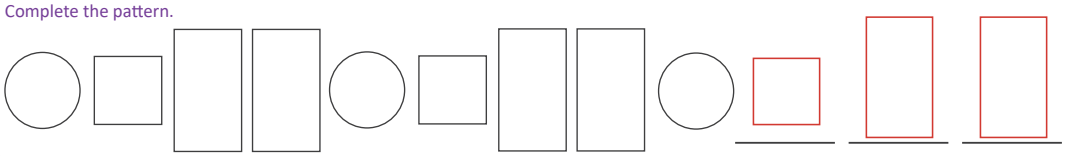
300 + 40 + 4



284

200 + 80 + 4

Complete the pattern.



Jake's Practice Book

Jake plays the violin. Write the missing information on his practice book. Make sure to include AM or PM. The first two are completed for you as examples.

Day of the Week	Length of Practice	Time Started	Time Ended
Monday	30 minutes	10:00 AM	10:30 AM
Tuesday	1 hour 30 minutes	7:00 AM	8:30 AM
Wednesday	2 hours	8:00 AM	10:00 AM
Thursday	30 minutes	10:30 AM	11:00 AM
Friday	1 hour 30 minutes	4:00 PM	5:30 PM
Saturday	30 minutes	9:30 AM	10:00 AM

Lesson 44

SPELLING 16 TO 19

Expanded Form & Counting Coins

- Have the child write the expanded form for 497.

Hundreds	Tens	Ones
4	9	7

400 + 90 + 7

- Give the child five of each coin: quarter, dime, nickel, penny. Have the child stack the coins in the boxes to show four different ways to equal 51¢. Take the coins off after completing each way.

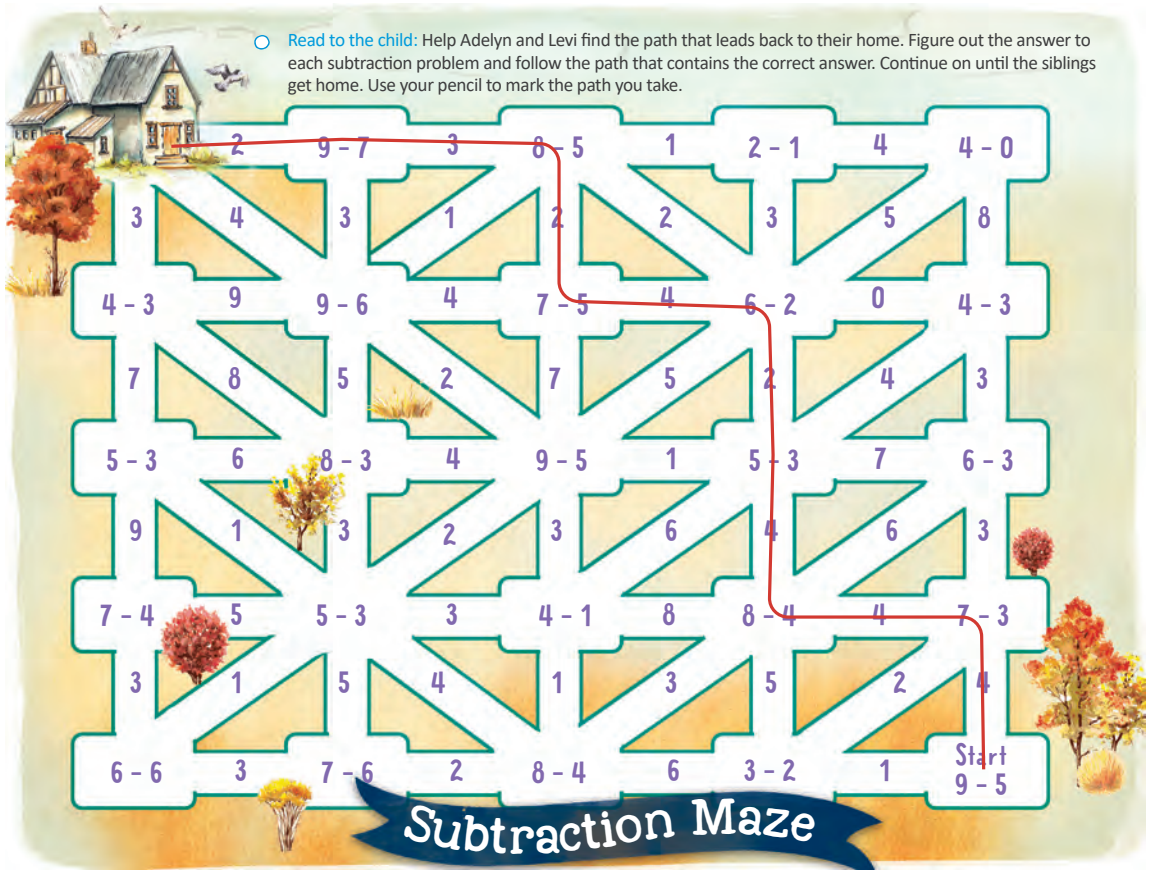
Answers will vary.

51¢

○ Write "sixteen," "seventeen," "eighteen," and "nineteen" on the whiteboard. Read to the child: Today, you are going to practice writing words for these numbers. Read them to me. You will notice for three of these words that you add "teen" at the end of the word, but for eighteen you only add "EEN," so you do not double the T in EIGHTEEN. Tell me aloud how to spell "teen." On the whiteboard write the number words for 16, 17, 18, and 19. You can reference the words I wrote if needed.

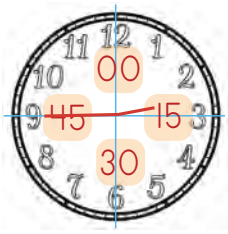
This morning Adelyn and her brother Levi collected wild pecans from the woods by their home. Each box below shows the start and end time and how many pecans they collected in their buckets. The siblings played a lot as well, so they didn't find many pecans, but, by the end of the morning, they had enough to make two pecan pies! For each time period, write the number of hours spent and the number word for the total pecans collected.

Start	End		Hours Spent	Number Word for Total Pecans Collected
7:30	8:30	8 + 8	1 hour	sixteen
8:00	11:00	9 + 9	3 hours	eighteen
9:30	10:30	8 + 9	1 hour	seventeen
7:00	11:00	10 + 9	4 hours	nineteen



INDEPENDENT REVIEW

In the orange boxes, write the quarters of the clock. Then draw hands on the clock to show 2:45.



For each dollar amount shown, circle the bills you would use that equal that dollar amount. Use the fewest number of bills. (Hint: Circle the highest value bills you can use first.)

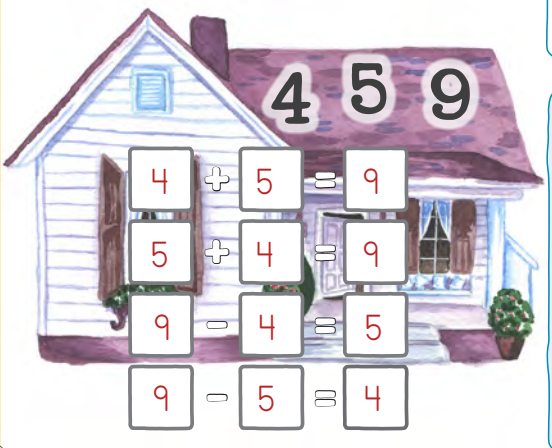
$186

$10 $20 $1 $1
$50 $100 $5 $20

$90

$10 $20 $10 $5
$50 $100 $20 $5

Write the fact family using the numbers at the top.



Complete the addition problem.

1

4,363,025
+ 3,430,346
7,793,371

Write and complete the problems for the stories. The first one is completed as an example; " means inch.

The mother's paw is 10" long. Her baby girl's paw is 6" long. How many inches longer is the mother's paw than the baby girl's paw?

10" - 6" = 4"

The father's paw is 12" long, while the mother's paw is 10" long. How many inches longer is the father's paw than the mother's paw?

12" − 10" = 2"

The mother's paw is 10" long. Her baby boy's paw is 7" long. How many inches longer is the mother's paw than the baby boy's paw?

10" − 7" = 3"

Find the elapsed time for the airplane using the start time in yellow and arrival time in blue.

4:00 PM — 2 hours — 6:00 PM

6:00 PM — 2 hours — 8:00 PM

7:00 AM — 1 hour — 8:00 AM

8:30 AM — 3 hours — 11:30 AM

Write the number that answers each question.

How many days are in a week?	How many seconds are in a minute?	How many minutes are in an hour?	How many hours are in a day?	How many days are in February in a leap year?	How many months are in a year?	How many weekdays are in a week?
7	60	60	24	29	12	5

Lesson 45

MEASURING: PART 1

Mental Math

Read to the child: An easy way to add 100 to any number is to increase the digit in the hundreds place by one. Mentally complete the problems in purple. Say the answers aloud.

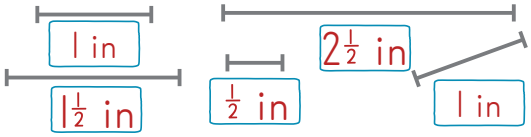
220 + 100 = 320 415 + 100 = 515 637 + 100 = 737 706 + 100 = 806

Expanded Form

On a whiteboard have the child write the expanded form for these numbers: 112 [100 + 10 + 2], 205 [200 + 0 + 5], and 760 [700 + 60 + 0].

Extra Item
12-inch ruler

○ Give the child a 12-inch ruler. **Read to the child:** Point to the inch lines on the ruler. How many are there? Halfway between each inch is a half-inch line. Point to each half-inch line. How many halves are in a whole? [2] Half of 1 is one-half. Half an inch is written like this. Write "$\frac{1}{2}$" on the whiteboard. With your ruler measure the line segments below and write the lengths in the blank boxes. Remember to start measuring the line segment at zero on the ruler.



○ On a piece of scratch paper, have the child use the ruler to create a $2\frac{1}{2}$-inch and a $3\frac{1}{2}$-inch line segment.

○ **Read to the child:** Tina owns a frame shop where she frames tiny paintings. Today she is working on framing some paintings by Vincent van Gogh, one of the most famous painters in history. He created about 2,100 works of art in his lifetime. Tina needs to measure the length and the height of each painting before she prepares the frames. Using your ruler, measure the length and height of each painting and write the number of inches in the box. Use the abbreviation "in" or use the inch sign: ".

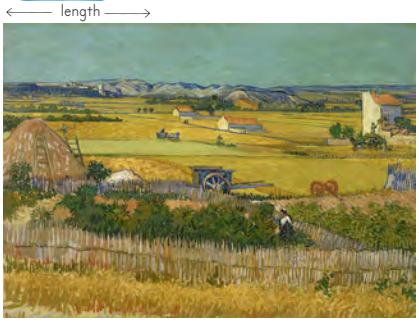
3 in
length

1

$2\frac{1}{2}$ in

$3\frac{1}{2}$ in
length

2



$2\frac{1}{2}$ in

INDEPENDENT REVIEW

In each box write the total time it took Tina to make the frame for each painting. The start and end times are given. When you have half-hour increments, write them like this: $1\frac{1}{2}$ hours, $2\frac{1}{2}$ hours, and so on.

3

Started: 1:00 PM
Ended: 2:30 PM

$1\frac{1}{2}$ hours

6

Started: 1:00 PM
Ended: 3:00 PM

2 hours

5

Started: 10:00 AM
Ended: 11:30 AM

$1\frac{1}{2}$ hours

4

Started: 3:00 PM
Ended: 3:30 PM

$\frac{1}{2}$ hours

Paintings by Vincent van Gogh (1853–1890)

1. "Fishing Boats on the Beach," 1888
2. "Harvest at La Crau," 1888
3. "Field with Poppies," 1888
4. "Landscape at Twilight," 1890
5. "Olive Trees with the Alpilles in the Background," 1889
6. "Road with Cypress and Star," c. 1890

Lesson 46

MEASURING: PART 2

Mental Math & Skip Counting

- **Read to the child:** An easy way to add 9 to any number is to first add 10 and then subtract 1. Mentally complete the problems in purple. Say the answers aloud.

7 + 9	5 + 9	8 + 9	4 + 9	6 + 9
16	14	17	13	15

- Have the child count by 50s from 50 to 1,000.
- Have the child count by 5s from 900 to 1,000.

Extra Item
30-centimeter ruler

○ Give the child a 30-cm ruler. Read to the child: In the last lesson, you learned to measure in inches, which are used in the US customary system. The metric system uses centimeters to measure length. Point to the centimeter lines on the ruler. Halfway between each centimeter is the half-centimeter line. Point to each half-centimeter line. With your ruler measure the line segments below and write the lengths in the blank boxes. The abbreviation for centimeter is "cm."

3 cm | $6\frac{1}{2}$ cm | 4 cm | 2 cm | $2\frac{1}{2}$ cm

○ On a separate sheet of paper, have the child use the ruler to create a 10-cm and a $12\frac{1}{2}$-cm line segment.

○ Read to the child: Today, Tina she is working on framing some paintings by Caspar David Friedrich. Tina needs to measure the length and the height of each painting before she prepares the frames. Using your ruler, measure the length and height of each painting and write the number of centimeters in the box. Remember to write "cm" for centimeter.

1
length: 7 cm

height: $6\frac{1}{2}$ cm

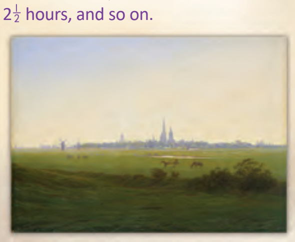
2
length: 9 cm

height: $5\frac{1}{2}$ cm

INDEPENDENT REVIEW

In each box write the total time it took Tina to make the frame for each painting. The start and end times are given. When you have half-hour increments, write them like this: $1\frac{1}{2}$ hours, $2\frac{1}{2}$ hours, and so on.

6


3


Started: 2:30 PM
Ended: 3:00 PM
$\frac{1}{2}$ hours

Started: 9:30 AM
Ended: 10:00 AM
$\frac{1}{2}$ hours

5


Started: 9:00 AM
Ended: 10:30 AM
$1\frac{1}{2}$ hours

4

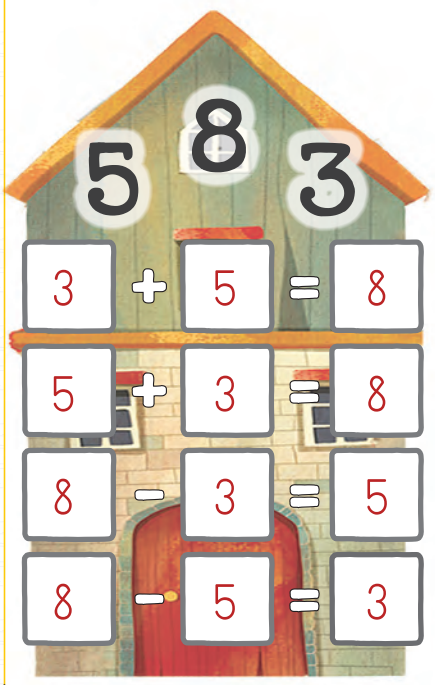

Started: 12:00 PM
Ended: 8:30 PM
$8\frac{1}{2}$ hours

Paintings by Caspar David Friedrich (1774–1840)

1. "The Midday," 1821
2. "Hill and Ploughed Field near Dresden," 1824
3. "Meadows near Greifswald," 1822
4. "The Watzmann," 1825
5. "Mountain Peak with Drifting Clouds," 1835
6. "Rocky Ravine in the Elbe Sandstone Mountains," 1823

INDEPENDENT REVIEW

Complete the fact family using the numbers at the top of the house.



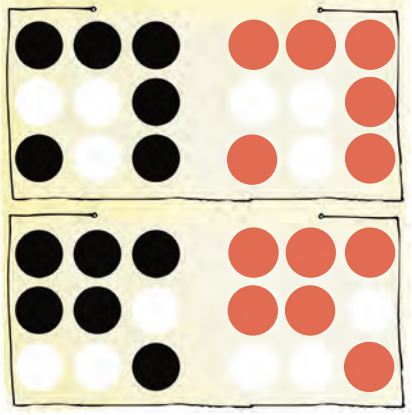
Complete each problem.

19	27	28	16	4
- 5	- 4	- 7	- 5	- 1
14	23	21	11	3

Circle the one that is different.

Dot GriD

Color the dots on the right to match the dots on the left.



Lesson 47

TIME: PART 8

Mental Math

Read to the child: An easy way to add 9 to any number is to first add 10 and then subtract 1. Mentally complete the problems in purple. Say the answers aloud.

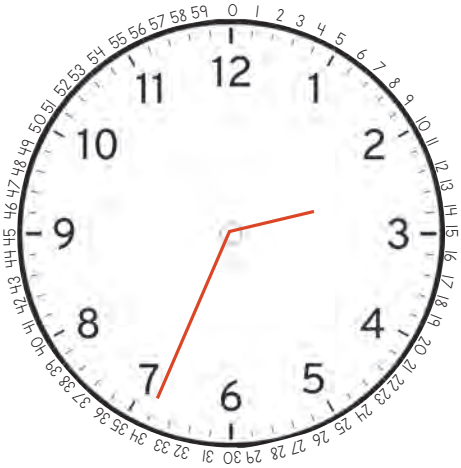
22 + 9	33 + 9	45 + 9	32 + 9
31	42	54	41

- Read to the child: Today, we are going to practice telling time to the minute. On the clock on this page, point to the 12. There are four little tick marks (short lines) between the 12 and the 1. Point to each one and count them. The tick marks represent minutes. The first tick mark is one minute after the hour, the second tick is two minutes, the third tick is three minutes, the fourth tick is four minutes, and then we land on the large number one, which is five minutes after the hour.

  Take the clock from the math box and give it to the child. Have the child show you the following times on the clock: 12:03, 3:02, 6:04, and 8:01.

  Read to the child: When determining the time to the minute, you do not need to start at the 12 and count each tick mark. Set the clock to 11:32. For example, to figure out what time it is on this clock, we can go to the nearest 5-minute increment before the minute hand and count from there. Point to the 6 on the clock. This would be 11:30. Let's count two more tick marks. Count with the child from 11:30 to 11:31 and then 11:32.

  Set the clock to 2:48. Tell me what time the clock shows, starting at 45 minutes after the hour and counting up to the exact minutes. Set the clock to different times and have the child tell you the times shown on the clock.



- Have the child draw hands on the clock on this page to show 2:34.
- Take a star from the math box and give it to the child. Read to the child: Suppose that you are taking a walk through the scene shown on this page. Put the star on the earliest time, and then show me the time on the clock from the math box. Then move the star to the next spot and show me the time on the clock, and so on until the last time.

INDEPENDENT REVIEW

Find the missing digits in the problems and the answers.

$1.53 + $3.24 = $4.77	$2.44 + $4.35 = $6.79	$2.32 + $6.45 = $8.77

In the image below, find the hidden numbers and write the number words in the boxes for each hidden number.

eighteen	two
sixteen	eleven
nineteen	seventeen

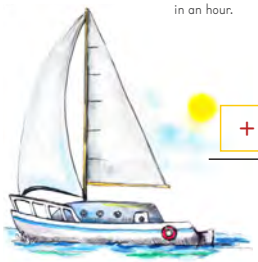
Write and complete the problems for the stories.

Nathan saw a dozen seagulls. Mark saw a half dozen seagulls. How many seagulls did they see altogether?

12 + 6 = 18

Cannon spent 1 hour painting the sailboat. Zack spent a quarter of an hour painting the sailboat. How many total minutes did they spend painting?

Hint: Write the number of minutes in an hour.



60

\+ 15

75 minutes

Star LOGIC

Take the stars from the math box and follow the clues to place the stars on the boxes in the right places.

PUZZLE 12

Use 1 purple star, 1 red star, 1 dark-green star, and 1 dark-blue star.

Clue 1: The purple star is in the top row.

Clue 2: The dark-blue star is on the bottom row.

Clue 3: The dark-green star is below the purple star and to the left of the dark-blue star.

PUZZLE 13

Use 1 brown star, 1 light-green star, 1 orange star, and 1 yellow star.

Clue 1: The brown star and the orange star are on the same row.

Clue 2: The yellow star is on the right side.

Clue 3: The brown star is above the yellow star.

Lesson 48

SUBTRACTION WITH MONEY

Money

Take the bills from the math box and give the child several bills in a mixed-up pile (such as 2 $100 bills, 6 $20 bills, 4 $10 bills, 6 $5 bills, and 3 $1 bills) and have the child sort the money into like bills and count the bills. (Start with the highest value bills.) Repeat with different piles of bills several times.

Extra Items
inch ruler
scissors

○ Read to the child: When we subtract amounts of money, we can line the amounts up as shown in the chart to the right. Point to the green column. This is the column that shows the number of pennies. Point to the blue column. This is the column that shows the number of dimes. Point to the decimal points, which look like periods. Decimal points mark the space between whole and partial amounts. When adding or subtracting money, decimal points separate the whole dollars from the partial dollars (cents). Point to the purple column. This column shows the dollars.

	dollars	dimes	pennies
	$8	.4	6
−	$6	.3	5
	$2	.1	1

Show the child how to complete the subtraction problem on the chart, starting in the hundredths column.

○ **Game: Fly Down Through the Clouds!** Cut out the boxes with dashed lines on the next page. Take two airplanes from the math box. Follow the instructions on the next page and play the game one or more times.

$5.67	$6.54
$4.98	$3.69
$8.37	$6.78
$9.45	$5.44

Fly Down Through the Clouds!

○ Read to the child: To play this game, we each need a whiteboard and dry-erase marker or we may share them. Please lay out the boxes we cut out; have the blank sides facing up. We will each choose a different cloud scene and put our airplane on "Start."

- You go first. Choose a box, turn it over, say the amount aloud, and write it on your whiteboard. Under that number, write a subtraction symbol and the number $3.34, like the example shown here:

$5.67
- $3.34

- Move your airplane to the cloud that shows the answer to the problem. Then it is my turn. We will always subtract $3.34 from the cards we choose. When all the boxes have been turned over, the player on the lowest cloud on the page is the winner.

INDEPENDENT REVIEW

This section is blank for double-sided cutting purposes.

Write the correct operation in the box: a plus or minus sign.

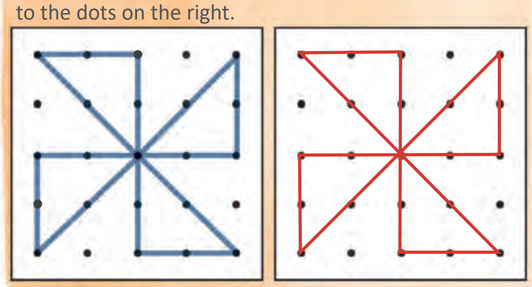
3 [+] 2 = 5
7 [+] 9 = 16
8 [−] 5 = 3
13 [−] 3 = 10
7 [+] 6 = 13
10 [−] 4 = 6

Find the missing digits in the problems and the answers.

$1.[1]5	$3.[7]6
+ $[5].42	+ $[5].23
$6.5[7]	$8.9[9]

PEG Patterns

Use a colored pencil to copy the design on the left to the dots on the right.



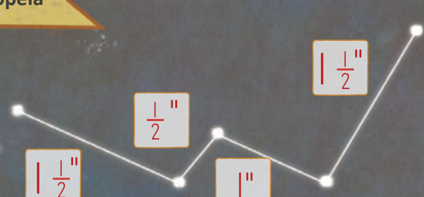
John's Constellation POSTER

John likes to look at the stars at night. Constellations are groups of stars that form a picture. The dots represent stars. John is drawing the constellations he sees on his constellation poster. Using a ruler, measure the length of each line segment between stars in the constellations to the nearest half inch and write the length in the box closest to it. Don't forget to write the symbol for inch: ". In the yellow box, write the time John saw each constellation.

Ursa Minor
"Little Bear"

10:06

Cassiopeia



8:23

Lesson 49

FRACTIONS: PART 1

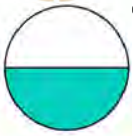
Mental Math

Read to the child: When you add a single-digit number to 9, take one less than the number and put a one in front of it. Let's look at 9 + 7. What is one less than 7? [6] If we put a 1 in front of 6, what do we have? [16] Yes, 9 + 7 = 16. Let's look at 9 + 5. What's one less than 5? [4] If we put a 1 in front of 4, what is it? [14] Yes, 9 + 5 = 14. I will say problems aloud. You use the adding 9 mental math strategy to tell me each answer aloud.

9 + 6 = 15 9 + 4 = 13 9 + 8 = 17 9 + 3 = 12

○ Read to the child: This is Victor Corbin from France. His family owns a small cheese-making factory. They make many of the cheeses into wheels that look like this one. This is a whole wheel of cheese.

If Victor cuts the cheese in half, the wheel is no longer a whole. Instead, it is two halves, and each half is a fraction of the whole. A ***fraction*** is part of a whole.



Look at the circle below. It is divided into two halves, and one half is shaded. Point to the fraction $\frac{1}{2}$. This is how we show the fraction one-half. Fractions have two numbers with a line between the numbers. The bottom number tells how many equal parts a whole is divided into. The top number tells how many parts are shaded or used.

$\frac{1}{2}$

○ Point to each shape below and read the type of fraction (one-half, one-fourth, etc.). Read to the child: For each of the circles shaded with teal, follow these steps to write the fraction of circle that is shaded.

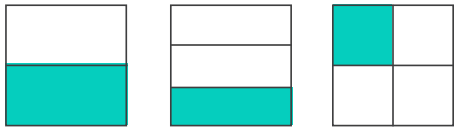
1. Below the line in the orange box, write the total number of equal parts shown on the circle.
2. Above the line in the orange box, write the number of parts shaded.

One-Half One-Third One-Fourth

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$

○ Point to each shape below and read the type of fraction (one-half, one-fourth, etc.). Read to the child: Repeat the steps above for the squares below.

One-Half One-Third One-Fourth

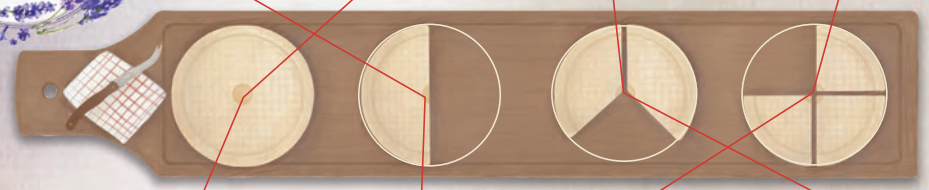


$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$

Cheese Board Fractions

○ Have the child draw a line from each cheese wheel to the fraction name above the cheese board that shows how many sections of cheese are left. Then have the child draw a line from the fraction below the cheese board to the matching cheese.

One-Half Whole Two-Thirds Three-Fourths



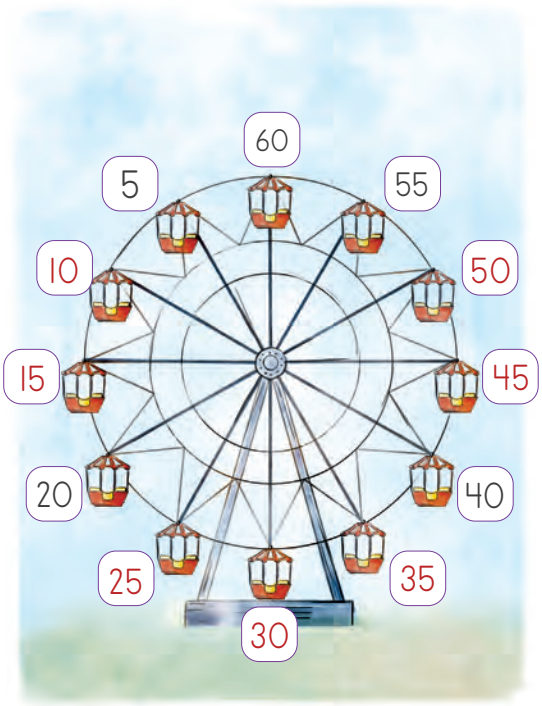
1 $\frac{1}{2}$ $\frac{3}{4}$ $\frac{2}{3}$

○ In the boxes below the cheese board, have the child write the fraction of each cheese wheel that is left.

$\frac{1}{2}$ $\frac{2}{3}$ $\frac{1}{4}$

INDEPENDENT REVIEW

Going clockwise, skip count by 5s backward to fill in the missing numbers.



Complete the addition problems. Don't forget to carry the 1s. Remember the dollar sign and decimal point in your answer.

$1.25	$2.26	$1.38
+ $0.65	+ $0.25	+ $0.44
$1.90	$2.51	$1.82

Complete the subtraction problems. Remember the dollar sign and decimal point in your answer.

$4.35	$8.79	$6.22
- $3.24	- $5.35	- $3.01
$1.11	$3.44	$3.21

Check Your Addition Problems with Subtraction

5 + 2 = 7 → 7 − 2 = 5

6 + 3 = 9 → 9 − 3 = 6

Lesson 50

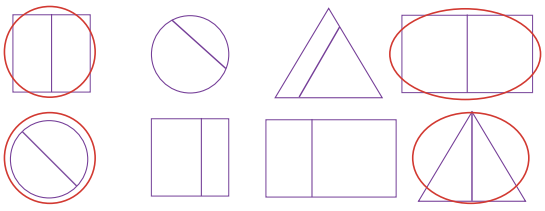
FRACTIONS: PART 2

Mental Math

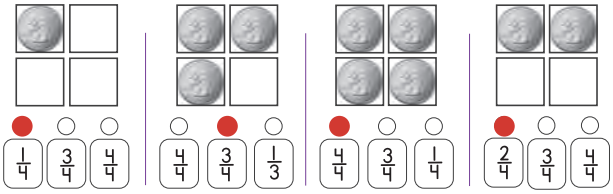
Read to the child: I will say problems aloud. You use the adding 9 mental math strategy to tell me each answer aloud.

9 + 7	9 + 6	9 + 8	9 + 4	9 + 5	9 + 3
16	15	17	13	14	12

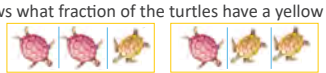
○ Read to the child: Circle the shapes that are divided into equal parts.



○ Read to the child: A fraction is part of a whole. Fractions have two numbers with a line between the numbers. The bottom number tells how many equal parts a whole is divided into. The top number tells how many parts are shaded or used. Four quarters equal a dollar. Under each quarter or group of quarters, fill in the circle that shows what fraction of a dollar it is.

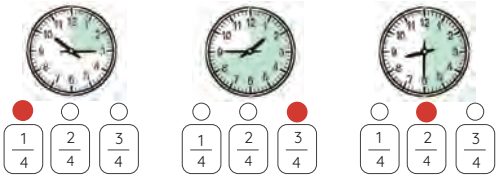


○ Read to the child: For each group of three turtles, fill in the fraction that shows what fraction of the turtles have a yellow shell. Remember, the total number of turtles goes on the bottom of the fraction.



1/3 2/3

○ Read to the child: An hour can be divided into four quarters. Fill in the circle that shows what fraction of an hour is shown on each clock.



○ Take the fraction dice from the math box. Read to the child: Let's play the "Fraction Dice Game." You roll the two dice at the same time. If both dice show the same fraction, fill in a box under "Child." If both dice do not show the same fraction, it is my turn. The first person to get their boxes filled wins. This is a game of chance and gives practice recognizing fractions. We will play this quick game several times in the course.

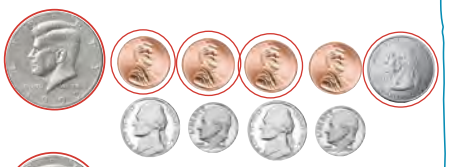
INDEPENDENT REVIEW

Check Your Addition Problems with Subtraction

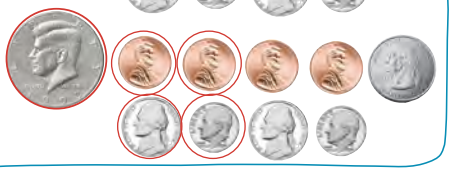
$$\begin{array}{r} 5 \\ +\ 4 \\ \hline 9 \end{array} \quad \begin{array}{r} 9 \\ -\ 4 \\ \hline 5 \end{array} \qquad \begin{array}{r} 6 \\ +\ 3 \\ \hline 9 \end{array} \quad \begin{array}{r} 9 \\ -\ 3 \\ \hline 6 \end{array}$$

For each amount shown, circle the coins you would use to equal the amount. Use the fewest number of coins. (Hint: Circle the highest value coins you can use first.)

78¢



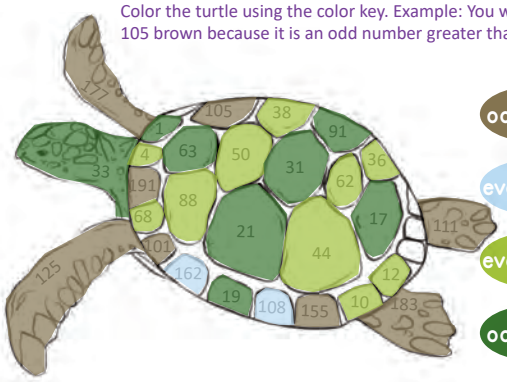
67¢



Complete each problem.

$\begin{array}{r} 19 \\ -\ 8 \\ \hline 11 \end{array}$	$\begin{array}{r} 18 \\ -\ 4 \\ \hline 14 \end{array}$	$\begin{array}{r} 29 \\ -\ 6 \\ \hline 23 \end{array}$
$\begin{array}{r} 18 \\ -\ 5 \\ \hline 13 \end{array}$	$\begin{array}{r} 8 \\ -\ 3 \\ \hline 5 \end{array}$	$\begin{array}{r} 59 \\ -\ 7 \\ \hline 52 \end{array}$
$\begin{array}{r} 28 \\ -\ 3 \\ \hline 25 \end{array}$	$\begin{array}{r} 9 \\ -\ 3 \\ \hline 6 \end{array}$	$\begin{array}{r} 58 \\ -\ 4 \\ \hline 54 \end{array}$

Color the turtle using the color key. Example: You would color 105 brown because it is an odd number greater than 100.



Lesson 51

ADDITION: REGROUPING ONES AND TENS

Mental Math

Read to the child: I will say problems aloud. You use the adding 9 mental math strategy to tell me each answer aloud.

9 + 6	9 + 7	9 + 8	9 + 5	9 + 4	9 + 3
15	16	17	14	13	12

○ Read to the child: Let's review. If any column in addition adds up to more than 9, we carry a digit to the top of the next column. Carrying a number like this is called ***regrouping***. Write this problem on the whiteboard:

$$\begin{array}{r} 249 \\ +\ 53 \\ \hline \end{array}$$

First, add the numbers in the ones column. 9 + 3 is 12. 12 is 1 ten and 2 ones. Write the 2 ones in the ones column and write the 1 at the top of the tens column.

Hundreds	Tens	Ones
	1	
2	4	9
+	5	3
		2

Now add the numbers in the tens column.

1 + 4 + 5 is 10. We have 10 tens, but we can't put "10" in the tens column. The 0 goes in the tens place, and we write the 1 in the hundreds column because 10 tens equals 1 hundred. Remember, if the numbers in any column add up to more than 9, we carry a digit to the top of the next column, or place value. Carrying a number like this is called regrouping.

Hundreds	Tens	Ones
1	1	
2	4	9
+	5	3
3	0	2

The last step is to add the numbers in the hundreds column. 1 + 2 is 3, so write 3 in the hundreds place.

○ Have the child complete the problems.

Hundreds	Tens	Ones
1	1	
3	4	8
+ 3	5	4
7	0	2

Hundreds	Tens	Ones
1	1	
4	6	7
+ 2	6	7
7	3	4

Hundreds	Tens	Ones
1	1	
2	6	8
+ 5	5	8
8	2	6

Hundreds	Tens	Ones
1	1	
2	7	9
+ 2	5	9
5	3	8

Hundreds	Tens	Ones
1	1	
6	5	7
+2	5	5
9	1	2

Hundreds	Tens	Ones
1	1	
2	5	7
+1	8	6
4	4	3

Star LOGIC

Take the stars from the math box and follow the clues to place the stars on the boxes in the right places.

PUZZLE 14

Use 1 red star, 1 brown star, 1 light-green star, 1 yellow star, and 1 orange star.

Clue 1: The yellow star is to the right of the orange star.

Clue 2: The brown star is between the red star and the light-green star.

Clue 3: The red star is on the left of the brown star.

PUZZLE 15

Use 1 pink star, 1 purple star, 1 dark-green star, 1 dark-blue star, and 1 light-blue star.

Clue 1: The purple star is between the pink star and the dark-green star.

Clue 2: The dark-green star is on the right.

Clue 3: The dark-blue star is on the left.

INDEPENDENT REVIEW

MISSING Moons

Two planets in our solar system do not have moons: Venus and one other. Use the chart to complete the code and figure out the other planet that has no moons.

s	r	e
y	m	n
u	t	c

m e r c u r y

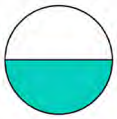
Complete the addition problems. Don't forget to carry the 1s. Don't forget the dollar sign and decimal point in your answer.

$1.25	$2.26	$1.38
+ $0.65	+ $0.25	+ $0.44
$1.90	$2.51	$1.82

For each of the shapes, follow these steps to write the fraction of the circle that is shaded.

1. Below the line in the orange box, write the total number of equal parts shown on the shape.
2. Above the line in the orange box, write the number of parts shaded.

One-Half



$\frac{1}{2}$

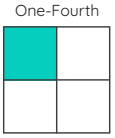
One-Third

$\frac{1}{3}$

One-Fourth

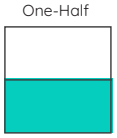
$\frac{1}{4}$

One-Fourth



$\frac{1}{4}$

One-Half



$\frac{1}{2}$

One-Third

$\frac{1}{3}$

Lesson 52

ASSOCIATIVE PROPERTY AND ADDING 3 ONE-DIGIT NUMBERS

Skip Counting

- Have the child skip count by 3s from 3 to 30.
- Have the child skip count backward by 25s from 200 to 25.

25 50 75 100 125 150 175 200

Time

- Take the clock from the math box and have the child set the clock to the following times:

half past 4 | quarter to 3 | 4:17 | quarter to 2:00

- Have the child tell you what time noon is [12 PM] and what time midnight is [12 AM].

Extra Item
small bowl

Start the Lesson Here

Read to the child: In addition problems the numbers you are adding together are called ***addends***, and the ***sum*** is the answer. Write "5 + 1 + 2 = 8" on the whiteboard. This problem has three addends. What are they? [5, 1, and 2] What is the sum? [8]

When you add three numbers or addends together, the order you add them in does not matter. This is the ***associative property***. Choose two of the numbers and add them together. Then add the sum of the first two numbers to the third number. Write "5 + 5 + 2 = 12" on the whiteboard. Let's look at this problem. I am going to add 5 + 5 first. The sum is 10. Then I add 10 + 2, and the answer to the problem is 12. Look at the addition problems in purple. When adding three numbers together, you can add the first two numbers in your mind, or you can write the sum of the first two numbers as shown.

10
4 + 6 + 2 = 12

4
6 } 10
+ 2
12

Write these addition problems on the whiteboard and have the child complete them: 4 + 6 + 2 = 12 | 5 + 3 + 4 = 12.

Runway Race

Take two airplanes and the stars from the math box. Read to the child: Let's play "Runway Race." Let's each choose an airplane and a runway on this page and put our airplanes on "Start." We'll put the stars in the bowl. You go first. Choose three stars from the bowl without looking at them. Turn them over to see the numbers. Write those three numbers on the whiteboard as an addition problem and complete the problem. I'll choose three numbers and write and complete a problem too. Whoever has the highest sum gets to move forward one space on the runway. That i 1. We will continue until one of us reaches "Takeoff."

Answers will vary.

Start — Takeoff

Start — Takeoff

INDEPENDENT REVIEW

Complete the problems.

Hundreds	Tens	Ones
	1	1
	2	4	6
+	3	5	4
	6	0	0

Hundreds	Tens	Ones
	1	1
	6	8	7
+	2	6	7
	9	5	4

Hundreds	Tens	Ones
	1	1
	2	6	8
+	5	7	9
	8	4	7

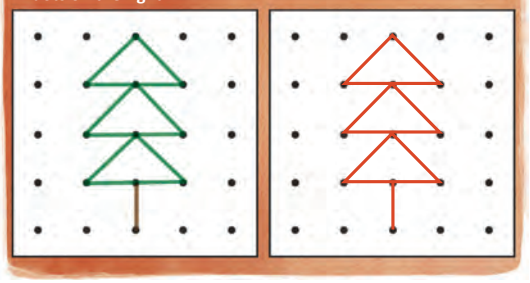
Hundreds	Tens	Ones
	1	1
	4	7	9
+	2	8	9
	7	6	8

Hundreds	Tens	Ones
	1	1
	3	6	8
+	2	5	5
	6	2	3

Hundreds	Tens	Ones
	1	1
	5	4	9
+	1	8	6
	7	3	5

PEG Patterns

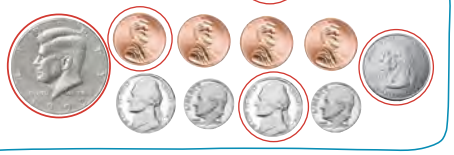
Use colored pencils to copy the design on the left to the dots on the right.



For each amount of cents shown, circle the coins you would use to equal the amount. Use the least number of coins. (Hint: Circle the highest-value coins you can use first.)

59¢

81¢



Lesson 53

COUNTING DOLLARS AND COINS

Days in Each Month Poem

Have the child practice memorizing the poem. Ask the child how many days are in January, March, May, and June.

How many days are in each month? It's clear!
February has 28, but 29 each leap year.
Thirty days are in September,
April, June, and November.
The rest have 31.
The rest have 31.

Skip Counting

Have the child skip count by 3s from 3 to 30.

○ Take these items from the math box: 8 $5 bills, 5 $1 bills, 3 quarters, 5 dimes, 4 nickels, 4 pennies. Read to the child: Today we will suppose you are at the pet store buying fish for a fish tank. Let's practice counting and writing money amounts first. I will hand you some bills and coins. You add them up and write the total in the boxes below. First, add the bills together. To do this, sort like bills and coins together before counting them. Add bills and then coins with the highest value first. When you write the amounts, make sure to include the dollar sign and write a decimal point after you write the amount of dollars. The amount of cents that is less than a dollar goes to the right of the decimal point. Give the child the bills and coins listed.

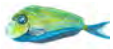
1 $5 | 2 $1 | 2 quarters | 2 dimes | 2 pennies
$7.72

1 $5 | 4 $1 | 3 quarters | 2 dimes | 4 pennies
$9.99

○ Choose your four favorite fish from below that you would buy for your fish tank. I will give you the amount of money needed to buy the fish. You count the bills and coins and write the total amount in the boxes by the fish you chose.


$18.36
3 $5 | 3 $1 | 1 quarter | 1 dime | 1 penny


$15.73
2 $5 | 5 $1 | 2 quarters | 2 dimes | 3 pennies


$23.98
4 $5 | 3 $1 | 3 quarters | 2 dimes | 3 pennies


$34.75
6 $5 | 4 $1 | 2 quarters | 2 dimes | 1 nickel


$43.80
8 $5 | 3 $1 | 2 quarters | 1 dime | 4 nickels


$40.95
7 $5 | 5 $1 | 2 quarters | 3 dimes | 3 nickels

○ Read to the child: Now choose one of the items below for your fish tank and give me the amount of money needed to buy it. Use the least amount of bills and coins possible.


$1.75


$3.10


$5.53

INDEPENDENT REVIEW

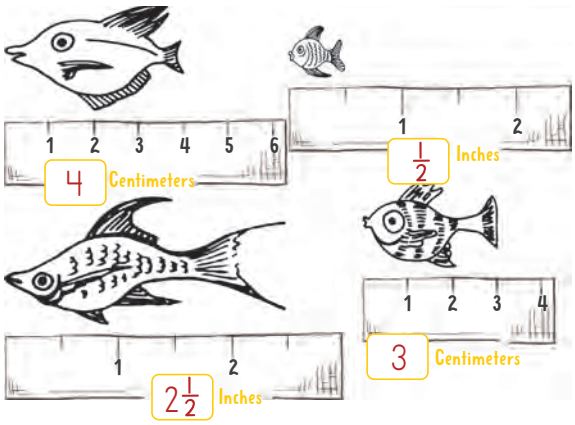
Complete the crossword puzzle. Use number words for the answers with numbers.

Across:
1. The answer to an addition problem. Ends with "m."
2. 7 + 6
3. The number after 17
4. The double of 6
6. 11 - 10

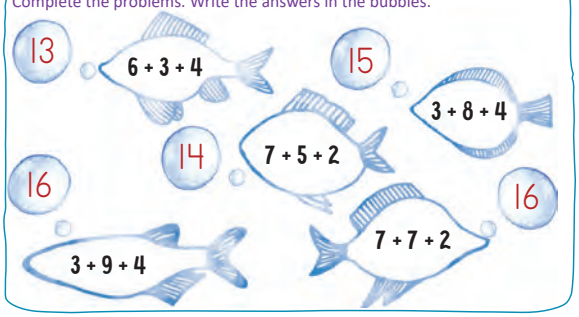
Down:
1. 9 + 8
2. 8 - 5
5. 10 + 1

1 s	u	m							
e									
v									
e									
2 t	h	i	r	t	e	e	n		5 e
h							t		l
r				4 t	w	e	l	v	e
e							e		v
3 e	i	g	h	t	e	e	n		e
								6 o	n e

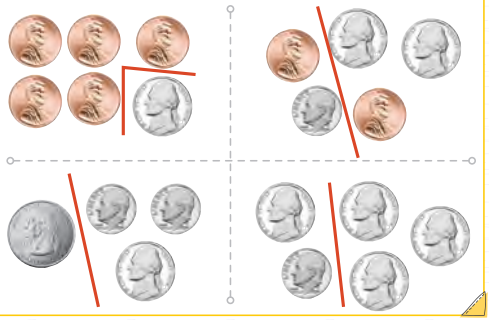
Write the length of each baby fish in inches or centimeters.



Complete the problems. Write the answers in the bubbles.



Draw a line between the coins in each group to divide the total value in half.



Lesson 54

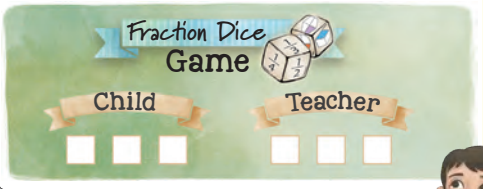
TIME: PART 9

Mental Math

Read to the child: Use the adding 9 mental math strategy to tell me each answer.

9 + 3	9 + 5	9 + 4	9 + 8	9 + 6	9 + 7
12	14	13	17	15	16

Play the "Fraction Dice Game." (Instructions are on page 145.)



○ Take the clock from the math box. Read to the child: "Thomas, it's a quarter to 7, time to check your blood sugar!" Thomas looks at his clock and can't believe it is already time to check his blood sugar again. He was recently diagnosed with diabetes and now watches the clock closely to make sure he checks his blood sugar at four scheduled times throughout the day. Three of the times are quarter after 11, half past 3, and quarter to 7. Write the times he checks his blood sugar below. Then show them on the clock from the math box.

Quarter after 11	Half past 3	Quarter to 7
11:15	3:30	6:45

○ Read to the child: The sun begins to come through Thomas' window. His alarm goes off, and he looks to see that it is a quarter to the hour. Look at his alarm clock. What time does it show?

Before he gets out of bed, he lays there for 3 minutes after his alarm goes off. Show the time on the clock from the math box for the time he got out of bed.

○ Read to the child: Write the times in the boxes below, and then show them on the clock from the math box.

Quarter to 12	Quarter to 9	Quarter to 1
11:45	8:45	12:45

○ Read to the child: Repeat the poem in the box with me two times. Then circle the time shown on each clock, considering the activity Kim is doing.

AM starts at midnight and goes to 11:59 AM.
PM starts at noon and goes to 11:59 PM.

Kim is asleep.	Kim is doing chores.	Kim is eating breakfast.
2:45	1:45	7:45
Quarter past 3 PM	~~Quarter past 1 PM~~	~~Quarter to 8 AM~~
~~Quarter to 2 AM~~	Quarter to 2 PM	~~Quarter to 7 AM~~
Quarter to 3 AM	~~Quarter past 2 AM~~	Quarter to 8 AM

○ Read to the child: Look at each time below and tell me two ways you could say these times.

9:45	1:15	4:30	1:45
quarter to 10, nine forty-five	quarter after 9, nine fifteen	half past 4, four thirty	quarter to 2, one forty-five

INDEPENDENT REVIEW

The gold text shows when a hot-air balloon flight started. The blue text shows how long the flight was. Write the time the flight ended in the blue box. Include AM or PM.

9:00 AM	1 hour 30 minutes	10:30 AM
7:00 AM	1 hour	8:00 AM
1:30 PM	1 hour 30 minutes	3:00 PM
3:30 PM	2 hours	5:30 PM

Write the number of days in each month. If needed, reference the poem on page 152.

April	May	June
30	31	30

Complete the problems.

Hundreds	Tens	Ones		Hundreds	Tens	Ones		Hundreds	Tens	Ones
1	1			1	1			1	1	
4	5	8		4	7	4		5	9	8
+ 4	6	4		+ 2	6	7		+ 3	4	6
9	2	2		7	4	1		9	4	4

Write one of your parents' phone numbers.

Answers will vary.

Complete each problem.

$4.56	$1.19	$9.27
- $1.03	- $0.17	- $8.16
$3.53	$1.02	$1.11
$5.39	$7.62	$3.97
- $2.06	- $3.51	- $1.42
$3.33	$4.11	$2.55

Lesson 55

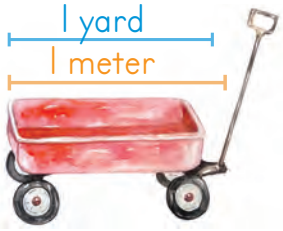
MEASURING: PART 3

Money

Take the bills from the math box, give the child several bills in a mixed-up pile (such as 2 $100 bills, 6 $20 bills, 4 $10 bills, 6 $5 bills, and 3 $1 bills), and have the child sort the money into like bills and count the bills. (Start with the highest value bills.) Repeat with different piles of bills several times.

Extra Item
inch ruler

○ Note: This lesson is designed to introduce the child to the idea that there are different systems and units of measurement and to help the child determine whether something would be measured in yards/meters or miles/kilometers. The child is not expected to remember the lengths of yards or meters or the conversion between them. Read to the child: Yards are used in the US customary system, and meters are used in the metric system.

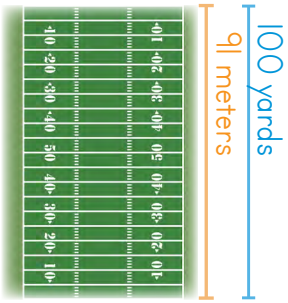


Let's talk about how long meters and yards are. Look at the picture of the wagon. A yard is about as long as a wagon. A meter is just a little longer than a yard. Using the picture as a reference, answer the questions:

1. Which is longer: a yard or a meter? meter
2. Is a loaf of bread longer or shorter than a yard? Than a meter? shorter, shorter
3. Is a horse longer or shorter than a yard? longer
4. Is your arm longer or shorter than a meter? shorter

Have the child use a ruler to measure 1 yard (3 feet) of a table.

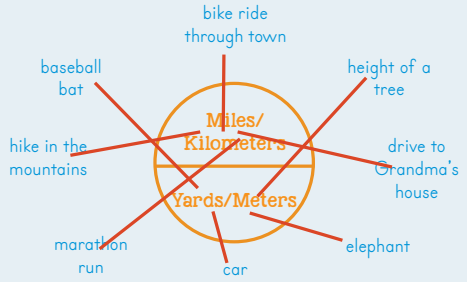
A football field is 100 yards or about 91 meters long. If you walked 100 yards and your friend walked 91 meters, would you have walked the about the same distance? yes



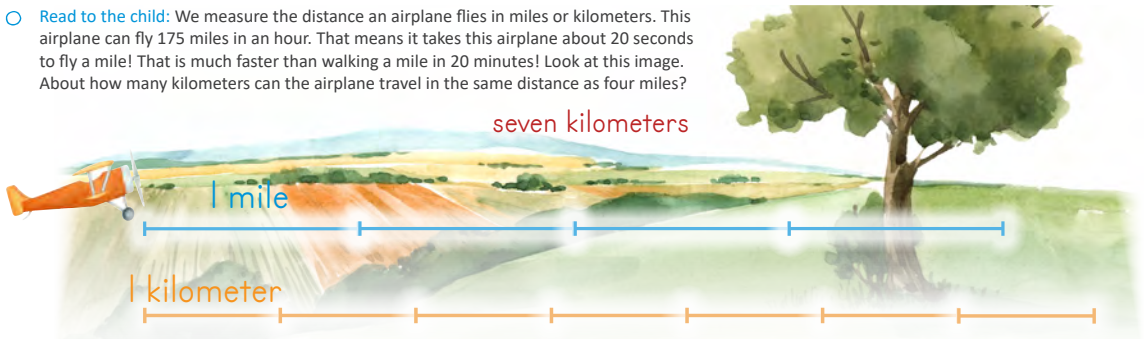
Miles (used in the US customary system) and kilometers (used in the metric system) measure long distances. It takes about 20 minutes to walk a mile at an average speed. About how long does it take to walk a mile? 20 minutes

A kilometer is shorter than a mile. It takes about 12 minutes to walk a kilometer at an average speed. A mile is about 18 football fields long. A kilometer is about 11 football fields long.

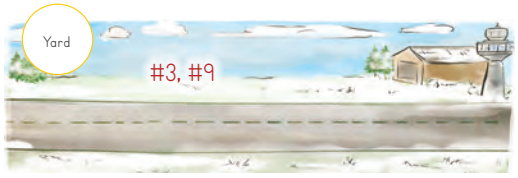
○ Read to the child: Draw a line from each item below to the units that are more reasonable.



○ Read to the child: We measure the distance an airplane flies in miles or kilometers. This airplane can fly 175 miles in an hour. That means it takes this airplane about 20 seconds to fly a mile! That is much faster than walking a mile in 20 minutes! Look at this image. About how many kilometers can the airplane travel in the same distance as four miles?

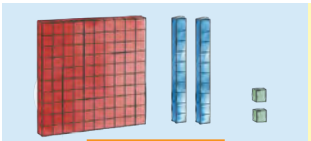


○ Take an airplane from the math box. Read to the child: Let's do an activity to review what we learned in this lesson. I will read you a sentence, and you place the airplane on the airport that is labeled with the right answer. Read to the child the following questions and statements. Check the answer key for answers if needed. Repeat the set of questions as many times as needed. 1) You can walk this far in about 20 minutes. 2) You can walk this far in about 12 minutes. 3) Would you use yards or miles to measure the length of a kitchen table? 4) Which is longer: a mile or a kilometer? 5) Would you use meters or kilometers to measure your height? 6) Which is longer: a yard or a meter? (Look at the wagon picture on the previous page.) 7) What would you measure size of an ocean with: miles or yards? 8) What would you measure the height of a tree with: kilometers or meters? 9) What would you measure the length of a boat with: miles or yards?



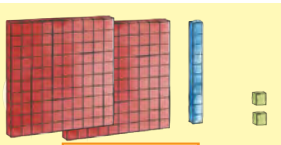
INDEPENDENT REVIEW

Write the standard form and expanded form for each set of base-10 blocks.



122

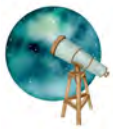
100 + 20 + 2



212

200 + 10 + 2

Write and complete the problem for the story.



Matt saw 50 stars in his telescope.

Some clouds covered up 25 of the stars, and then other clouds covered up 25 more stars. How many stars can he see now?

50 − 25 − 25 = 0

Complete the problems.

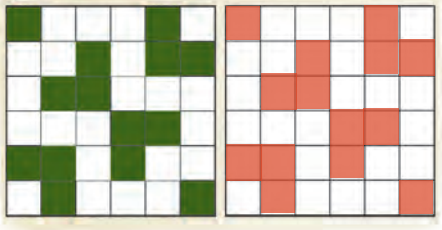
Hundreds	Tens	Ones
	1	1
	8	7
+	1	6
	4	
	10	4
		1

Hundreds	Tens	Ones
	1	1
	6	7
+	2	8
	4	
	9	6
		1

Hundreds	Tens	Ones
	1	1
	5	8
+	3	4
	7	
	9	3
		2

Square GriD

Color the squares on the right to match the squares on the left.



Count by 25s to fill in the missing numbers.

75 | 100 | 125 | 150 | 175 | 200 | 225 | 250

Lesson 56

TIME: PART 10

Skip Counting

- Have the child skip count by 3s from 3 to 21.
- Have the child skip count by 25s from 25 to 200 and then backward by 25s from 200 to 25.

25 50 75 100 125 150 175 200

Mental Math

Have the child identify if the problem is doubles addition plus one or not and say the answer aloud.

8 + 7 = 15	6 + 3 = 9	7 + 6 = 13	9 + 8 = 17	5 + 6 = 11	7 + 4 = 11

Read to the child: Sophie is flying to France to visit her grandmother. She and her family just boarded the plane, and Sophie is so excited to see her grandmother that she is not sure how she is going to wait the 12 hours it takes to get there! Her mother reminds her that she has a backpack with different things she can do to make the time pass more quickly. After the plane takes off, a flight attendant announces that lunch will be served one hour from now. If it is 12:00 PM, what time will lunch be served? 1:00 PM

Read to the child: Sophie read and colored on the plane. Use the chart below to figure out all the times she did each activity. In the blue boxes, write the new times using the information in the orange ribbons. For example, she read two hours from 12:00 PM, which is 2:00 PM. Use the time line below if needed.

	Reading	Coloring
	 1 PM	 3 PM
TWO HOURS FROM NOW	3:00 PM	5:00 PM
1 HOUR FROM NOW	2:00 PM	4:00 PM
HALF AN HOUR FROM NOW	1:30 PM	3:30 PM

9 AM 9:30 10 10:30 11 11:30 12PM 12:30 1 1:30 2 2:30 3 3:30 4 4:30 5 5:30 6 6:30 7 7:30 8 8:30 9 PM

Time Flies

Take a 6-sided dice and an airplane from the math box. This is a one-player activity for the child. Read to the child: Place your plane on the first space of the game board. Roll the dice. The number on the dice shows the hour of the day and is always AM. For example, if you roll a 9, it is 9:00 AM. Then answer the question on the game board. If you answer correctly, move forward one spot. If you don't answer correctly, stay on the same spot, roll the dice, and answer again. Continue until you reach "Finish"! Play again, if desired.

What time will it be 2 hours from now?

What time was it 1 hour ago?

What time will it be a half hour from now?

What time will it be 2 hours from now?

Answers will vary.

What time was it a half hour ago?

What time will it be an hour and a half from now?

What time was it an hour and a half ago?

Finish

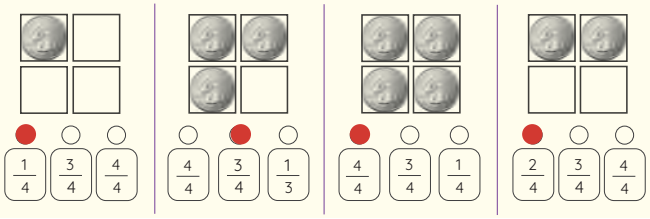
9 AM 9:30 10 10:30 11 11:30 12 PM 12:30 1 1:30 2 2:30 3 3:30 4 4:30 5 5:30 6 6:30 7 7:30 8 8:30 9 PM

INDEPENDENT REVIEW

These airplanes were in a race. With ordinal numbers, write which place you think each plane took in the race: 1st, 2nd, 3rd, 4th, or 5th.

Answers will vary.

Under each quarter or group of quarters, fill in the circle that shows what fraction of a dollar it is.



Write and complete the problem for the story.

Cannon spent half an hour studying Venus. Zack spent a quarter of an hour studying Venus. How many total minutes did they spend studying Venus?

30
\+ 15
45

minutes

Complete the subtraction problems. Don't forget the dollar sign and decimal point in your answer.

$5.65	$7.88	$8.46
- $2.15	- $3.52	- $4.25
$3.50	$4.36	$4.21

Check Your Addition Problems with Subtraction

5	9		5	8	
+ 4	- 4		+ 3	- 3	
9	5		8	5	

Lesson 57

ROUNDING TO THE NEAREST 10: PART 2

Skip Counting

- Have the child skip count by 3s from 21 to 33.
- Have the child skip count backward by 25s from 525 to 300.

300 325 350 375 400 425 450 475 500 525

Read to the child: When we round a number to the nearest 10, we determine if the number is closer to the multiple of 10 less than or greater than that number. For example, if someone asks you how many tomato plants your family grew in the garden this year, you may not know exactly how many. You know it might be 19, 20, or 21, but you can't remember exactly. You might say, "We have around 20 tomato plants," because 20 is a nice, easy number.

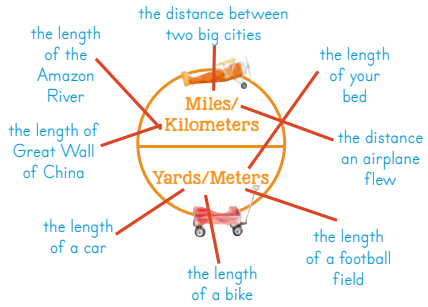
Point to 13 on the second umbrella below. Numbers that end with the digit 1, 2, 3, or 4 round down to the 10 before the number. Slide your finger from 13 to 10. Now point to 17. Numbers that end with the digit 5, 6, 7, 8, or 9 round up to the next 10. Slide your finger from 17 to 20.

Look at the illustration of an amazing garden on this page. I'm going to tell you the number of each type of vegetable in the garden, and you round it to the nearest 10.

The boxes are filled in the answer key for your reference if needed. 23 pumpkins [20] 37 carrots [40] 15 peppers [20] 16 zucchini [20] 32 tomatoes [30] 26 cucumbers [30] 34 beets [30]

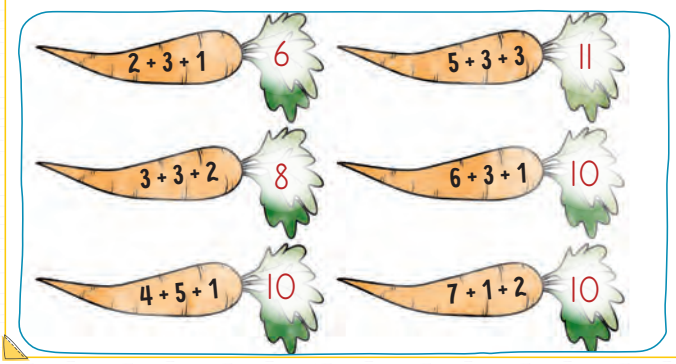
INDEPENDENT REVIEW

Draw a line from each blue item below to the units that are more reasonable. It takes about 20 minutes to walk a mile, and a meter is about as long as a wagon.



For each amount shown, circle the bills and coins you would use to equal the amount. (Hint: Circle the highest value bills and coins you can use first.)

Complete the problems. Write the answers in the carrots' leaves.



Write the correct time in the blue box if you start at 4 PM.

4 PM

1 HALF HOUR AGO	3:30 PM
2 HOURS FROM NOW	6:00 PM
1 HOUR AGO	3:00 PM
1 HOUR FROM NOW	5:00 PM

Your Wonderful Day!

AM starts at midnight and goes to 11:59 AM
PM starts at noon and goes to 11:59 PM

How wonderful each day is depends on your attitude, not what happens or doesn't happen to you. For each clock write the time shown on the clock, including the AM or PM.

You are sleeping, blessed to be in a warm bed.

11 : 35 PM

You are weeding the garden—not your favorite job—but you hum along with the birds and have a great time.

1 : 23 PM

You are eating breakfast with a smile on your face, even though your baby brother is being noisy.

7 : 15 AM

You are riding your bike as the sun starts to set. You love the warm breeze on your face and the colorful sky.

6 : 56 PM

You are eating lunch and are sad because your friend just moved to a different state. Your mom comforts you, and you feel hope.

12 : 05 PM

You are saying your prayers before you get in bed for the night. You have so many things to thank God for.

7 : 56 PM

Lesson 58

THERMOMETERS

Mental Math

Read to the child: An easy way to add 9 to any number is to first add 10 and then subtract 1. Mentally complete the problems in purple. Say the answers aloud.

22 + 9	33 + 9	45 + 9	32 + 9
31	42	54	41

○ Note: This lesson introduces children to several principles that will not be mastered or reviewed in this math level but will be mastered in Math 3. The objective to be mastered in this lesson is to read temperature on a thermometer to the nearest five degrees. Read to the child: A ***thermometer*** is a tool that measures ***temperature***, which is how hot or cold something is. The US customary and metric systems use different scales to measure temperature.

Point to the F on the thermometer on this page. The F stands for Fahrenheit, which is the temperature scale for the US customary system. As we have learned, the US customary system is used mostly in the United States and a few other countries.

Point to the C on the thermometer. For the metric system, the Celsius scale is used. The metric system is used by most of the world.

Fahrenheit and Celsius are the last names of the men who created these systems to measure temperature. In our country do we measure temperature using Fahrenheit or Celsius? No matter where we live, it is good for us to understand both systems.

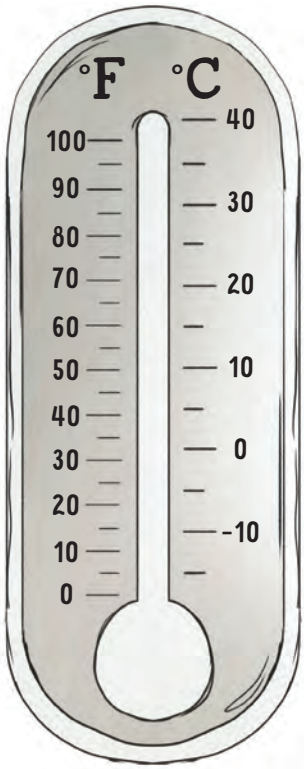
Point to the degree symbols (°) on the thermometer. This symbol stands for degree. Both scales measure temperature in degrees.

Point to the number 20 on the Fahrenheit side of the scale. This line is showing 20 °F. See how it has a longer line by it? Each longer line represents a number in the tens. The shorter lines between each number represent five. For example, move your finger to the shorter line above 20 °F. This is 25 °F. Move your finger to 45 °F. Move your finger to 85 °F.

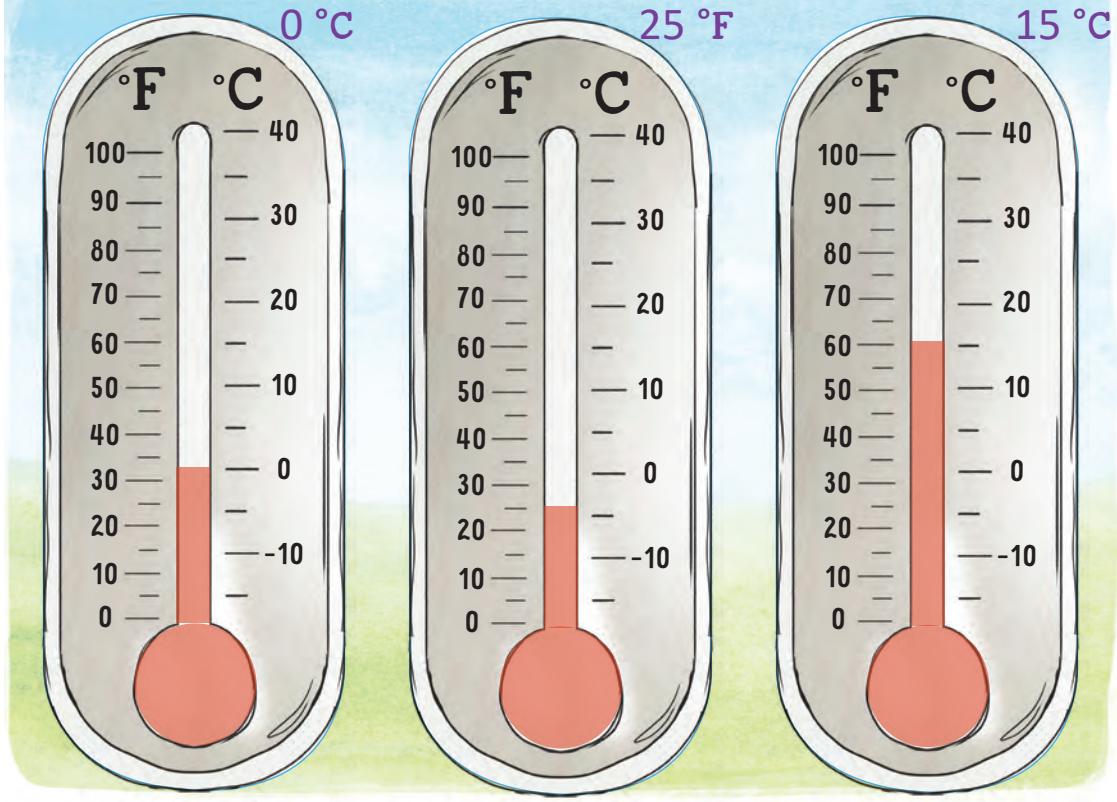
Point to the number 0 on the Celsius side of the thermometer. 0 °C is the temperature at which water freezes. Point to 5 °Celsius. Point to 25 °Celsius. Point to 30 °Celsius.

Water freezes at 0 °Celsius, which is 32 °Fahrenheit. Point to where you think 32 °F would be on this thermometer.

○ If desired, look up the current temperature where you are. Have the child point to about where that would be on the thermometer.



Have the child use a red crayon or colored pencil to fill in the thermometer to the degrees shown for each thermometer.



INDEPENDENT REVIEW

Circle the correct time.

2 HOURS FROM NOW	1 HOUR AGO	1 AND A HALF HOURS FROM NOW
1:30 PM	5:00 PM	10:00 AM
6:30 AM	4 PM	1 PM
3:30 PM	4 AM	10:30 AM
3 PM	7 PM	11:30 AM

Round each number below to the nearest 10.

27	30	34	30
21	20	38	40

Write the time shown on the clock. Write AM or PM based on the activity.

The cat sleeps just after midnight.

12 : 15 AM

The cat naps after dinner.

7 : 31 PM

The cat sleeps as the sun starts to rise.

5 : 49 AM

Count by 25s to fill in the missing numbers.

150	175	200	225	250	275	300	325

Lesson 59

TIME: PART 11

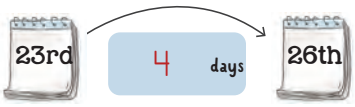
Mental Math

Read to the child: I will say problems aloud. You use the adding 9 mental math strategy to tell me each answer aloud.

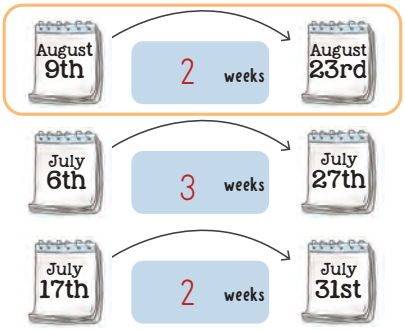
9 + 7	9 + 6	9 + 8	9 + 4	9 + 5	9 + 3
16	15	17	13	14	12

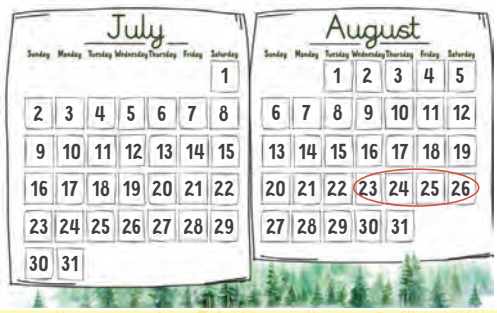
Play the "Fraction Dice Game." (Instructions are on page 145.)

Read to the child: Julia went on a 20-mile hike with her father. The days they were gone on the hike are circled in red on the calendar to the right. Let's find out how many days they were gone. Count the elapsed days from August 23rd to 26th. Use the calendar if needed. Write the number in the blue box.



Read to the child: To be ready for her hike, Julia started walking each day on August 9th. To find out how many weeks she exercised before leaving, point to the day on the calendar she started her hike, August 23rd. What day of the week is it? [Wednesday] Now move your finger to the Wednesday before that. That is one week. Keep counting each Wednesday until you reach August 9th. Write the number of weeks in the blue box. Fill in the other blue bloxes, using the calendar as needed.





INDEPENDENT REVIEW

The gold text shows when a hot-air balloon flight started. The blue text shows how long the flight lasted. Write the time the flight ended in the blue box. Include AM or PM.

7:00 AM	½ hour	7:30 AM
10:00 AM	1 hour	11:00 AM
1:00 PM	1½ hours	2:30 PM
3:00 PM	2 hours	5:00 PM

Write the number of days in each month. If needed, reference the poem on page 152.

April	May	June
30	31	30

Complete the problems.

Hundreds	Tens	Ones		Hundreds	Tens	Ones		Hundreds	Tens	Ones
1	1			1	1			1	1	
7	5	7		4	8	3		9	8	9
+ 4	6	4		+ 8	6	8		+ 3	4	6
12	2	1		13	5	1		13	3	5

Write a parent's phone number.

Answers will vary.

Round each number to the nearest 10.

51	50				
59	60	52	50	57	60
55	60	54	50	53	50

LESSONS 60–61

UNIT ASSESSMENT

Extra Items
centimeter ruler
inch ruler

Parent/Teacher

- Read the following information aloud to the child: Unit assessments give you practice with the math concepts learned in this unit, without having you over practice concepts that you have mastered. These assessments also give you practice working on math problems for an extended period of time. This helps you extend focus and attention span and to be better prepared for any type of testing you will have to do in the future. Here are some tips. First, make sure to always read the instructions carefully. Sometimes you can get answers wrong simply because you did not understand the instructions. Second, do not rush through exercises you think you already know. Instead, make sure to do your work carefully. Sometimes you can get answers wrong, even though you understand the concept, just because you rushed.
- For Lesson 60 have the child complete all the exercises with purple headers only. At this level you may need to read all or some of the instructions to the child. Correct the work. If the child makes one or more mistakes in a section, explain the concept and check the orange "Additional Practice" checkbox for that section.
- For Lesson 61 have the child complete all the orange sections **that are checked**. If the child still makes multiple mistakes, make sure the child understands why. All the principles will be reviewed again in upcoming units. If the child has only a few or no orange sections to practice, the child may spend time doing math games or move on to the next lesson.

Note: All concepts in Unit 2 will be reviewed throughout the rest of the course, but less frequently.

Student

ASSESSMENT WITH PARENT/TEACHER

Mark the triangle for any items the child completes incorrectly.

- Have the child raise his or her right hand and left hand.
- Have the child answer the doubles addition plus 1 problems. Answers should be given quickly.

7 + 8 15 6 + 7 13 5 + 6 11 8 + 9 17 4 + 5 9

- Have the child write the numbers 587 and 1,000 on the whiteboard.
- Have the child write 10 tally marks on the whiteboard.
- Have the child tell you how many are in a dozen and in a half dozen.
- Have the child count by 25s from 25 to 200.
- Have the child spell these numbers aloud: 1, 2, 3, 5, 11, 12, 13, 14.
- Have the child count by 2s from 280 to 300.
- Have the child answer the subtraction problems in which you can use doubles addition facts to find the answer. Answers should be given quickly.

16 - 8 8 12 - 6 6 14 - 7 7 10 - 5 5 18 - 9 9

- Have the child tell you the months of the year and how to know how many days are in each month (either tell you the poem on page 152 or show you the knuckle trick from the video "How Many Days Are in a Month? | Knuckle Mnemonic" on The Good and the Beautiful Kids YouTube channel).
- Have the child count by even numbers from 20 to 40.

Additional Practice

Complete the items above for which the triangle is marked.

EXPANDED FORM TO THE HUNDREDS

Write the expanded form of each number.

Hundreds	Tens	Ones
4	9	7

400 + 90 + 7

Hundreds	Tens	Ones
4	0	3

400 + 0 + 3

Hundreds	Tens	Ones
5	1	4

500 + 10 + 4

Hundreds	Tens	Ones
7	2	0

700 + 20 + 0

Additional Practice

Write the standard form and expanded form for each set of base-10 items.

114

100 + 10 + 4

222

200 + 20 + 2

ADD AND SUBTRACT 10 AND 100

Add 10 by increasing the digit in the tens place by one.

Hundreds	Tens	Ones
7	3	5

Hundreds	Tens	Ones
7	4	5

Subtract 10 by decreasing the digit in the tens place by one.

Hundreds	Tens	Ones
8	4	2

Hundreds	Tens	Ones
8	3	2

Add 100 by increasing the digit in the hundreds place by one.

Hundreds	Tens	Ones
5	1	8

Hundreds	Tens	Ones
6	1	8

Subtract 100 by decreasing the digit in the hundreds place by one.

Hundreds	Tens	Ones
6	9	4

Hundreds	Tens	Ones
5	9	4

Additional Practice

Add 10 to the number.	Subtract 10 from the number.	Add 100 to the number.	Subtract 100 from the number.
45 55	67 57	321 421	469 369

ELAPSED TIME

Write the elapsed time in the blue box.

4:30 PM — 1 ½ hours — 6:00 PM

Write the end time in the blue box. Include AM or PM.

7:00 AM — 30 minutes elapsed — 7:30 AM

Additional Practice

Write the elapsed time in the blue box.

6:00 AM — 1 ½ hours — 7:30 AM

Write the end time in the blue box. Include AM or PM.

5:30 PM — 30 minutes elapsed — 6:00 PM

MATH FACT FAMILIES

Use the three numbers to fill in the fact-family boxes.

7 + 5 = 12
5 + 7 = 12
12 − 7 = 5
12 − 5 = 7

7
12
5

Additional Practice

Use the three numbers to fill in the fact-family boxes.

6
8
2

6 + 2 = 8
2 + 6 = 8
8 − 6 = 2
8 − 2 = 6

SPELLING 16 TO 19

Write the word for each number.

16 sixteen
18 eighteen
17 seventeen
19 nineteen

Additional Practice

Cover the top section. Then write the word for each number.

17 seventeen
16 sixteen
19 nineteen
18 eighteen

MEASURING

Measure the line segments below in centimeters. Remember to include "cm."

3 cm
6 cm

Measure the line segments below in inches. Remember to include the inches sign: ".

½"
1"

Additional Practice

Write the length of one side of each box in inches or centimeters.


3 centimeters


2 centimeters


1 ½ inches


1 inches

ADDING NUMBERS WITH THREE OR MORE DIGITS

Complete the addition problems.

$$\begin{array}{r} 346 \\ +\ 353 \\ \hline 699 \end{array} \qquad \begin{array}{r} 234 \\ +\ 242 \\ \hline 476 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1} \\ 438 \\ +\ 456 \\ \hline 894 \end{array} \qquad \begin{array}{r} {\scriptstyle 1} \\ 6,218 \\ +\ 6,248 \\ \hline 12,466 \end{array}$$

Additional Practice

Complete the addition problems.

$$\begin{array}{r} {\scriptstyle 1} \\ 345 \\ +\ 237 \\ \hline 582 \end{array} \qquad \begin{array}{r} {\scriptstyle 1} \\ 3,439 \\ +\ 3,258 \\ \hline 6,697 \end{array}$$

TIME: PART 8

Write the time to the minute in the yellow box.

6:21

Additional Practice

Write the time to the minute in the yellow box.

3:54

SUBTRACTION WITH MONEY

Complete the money subtraction problems. Don't forget to write the decimal points and dollar signs in your answers.

$$\begin{array}{r} \$4.86 \\ -\ \$3.23 \\ \hline \$1.63 \end{array} \qquad \begin{array}{r} \$3.89 \\ -\ \$1.46 \\ \hline \$2.43 \end{array}$$

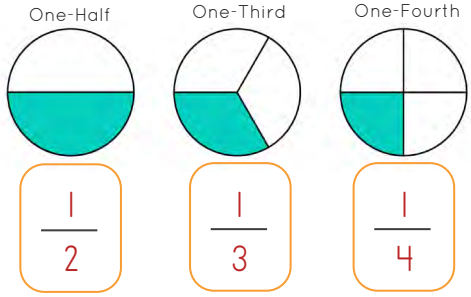
Additional Practice

Complete the money subtraction problems. Don't forget to write the decimal points and dollar signs in your answers.

$$\begin{array}{r} \$7.67 \\ -\ \$3.23 \\ \hline \$4.44 \end{array} \qquad \begin{array}{r} \$6.68 \\ -\ \$2.35 \\ \hline \$4.33 \end{array}$$

FRACTIONS

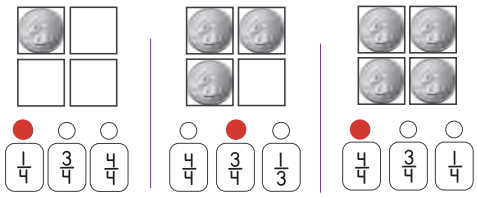
Write the fraction of the circle that is shaded in the orange box.



$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$

Additional Practice

Fill in the circle above the correct fraction.



ADDITION: REGROUPING MULTIPLE DIGITS

Complete the problems.

Hundreds	Tens	Ones
1	1	
3	7	8
+2	5	6
6	3	4

Hundreds	Tens	Ones
1	1	
4	7	5
+1	8	9
6	6	4

Hundreds	Tens	Ones
1	1	
5	8	6
+3	9	7
9	8	3

Additional Practice

Complete the problems.

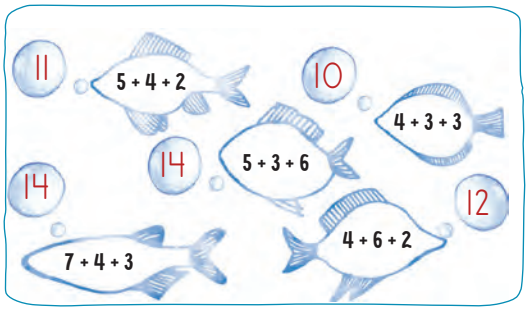
Hundreds	Tens	Ones
1	1	
2	8	7
+5	8	6
8	7	3

Hundreds	Tens	Ones
1	1	
6	5	4
+2	5	8
9	1	2

Hundreds	Tens	Ones
1	1	
7	5	8
+1	7	9
9	3	7

ADDING 3 ONE-DIGIT NUMBERS

Complete the problems. Write the answers in the bubbles.



Additional Practice

Complete the problems.

6 + 6 + 3 = 15

8 + 4 + 4 = 16

4 + 2 + 5 = 11

5 + 3 + 1 = 9

1 + 3 + 7 = 11

2 + 7 + 3 = 12

TIME: PART 9

Write the correct time in each box.

Quarter after 12

12 : 15

Half past 6

6 : 30

Quarter to 8

7 : 45

Quarter to 4

3 : 45

Additional Practice

Write the correct time in each box.

Quarter to 7

6 : 45

Quarter after 3

3 : 15

Quarter to 4

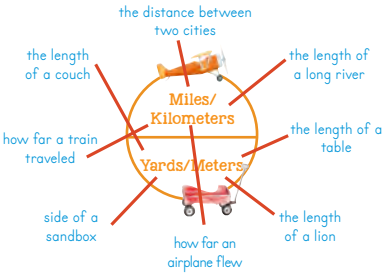
3 : 45

Half past 12

12 : 30

MEASURING

Draw a line from the item below to the units that are more reasonable. Remember, it takes about 20 minutes to walk a mile, and a meter is about as long as a wagon.



Additional Practice

Circle the correct answer.

Which is longer: a yard or a meter? Yard **Meter**

Which is longer: a mile or a kilometer? **Mile** Kilometer

Is an elephant longer or shorter than a yard? **Longer** Shorter

Is a football field longer or shorter than a mile? Longer **Shorter**

Lesson 62

COUNTING AND WRITING IN THE THOUSANDS

Skip Counting

- Have the child skip count backward by 25s from 200 to 25.

25 50 75 100 125 150 175 200

Time

- Take the clock from the math box and have the child set the clock to the following times:

half past 1 | quarter to 3 | 4:33 | 11:17

- Have the child tell you what time noon is [12 PM] and what time midnight is [12 AM].
- Have the child tell you how many seconds are in a minute [60], minutes in an hour [60], and hours in a day [24].

Start the Lesson Here

- Take an airplane from the math box and give it to the child. Read to the child: I will point to each number on the first runway below as I count by thousands. Runways for smaller planes need to be at least 6,000 feet long. Place your airplane on "Start" on the first runway below and move your airplane to each box, counting each thousand as you go until you reach "Takeoff." When you see the comma in the number, say THOUSAND. Large airplanes need runways that are at least 8,000 feet long. On the second runway, write in the missing 1,000s.
- Take the numbers from the math box and give them to the child. Take an airplane from the math box and keep it. Lay out all the numbers. Read to the child: Let's play "Fastest Flight." On the board below, you put your airplane on "Start," and I will put my airplane on "Start." I will mix up the numbers, and you choose four of them while closing your eyes. Arrange the digits to make the largest number you can. Say the number, and then show me where the comma would go, which is where you say "thousand." Then put the numbers back and mix them up, and I'll choose four while closing my eyes and doing the same thing. The person with the greater number gets to move forward one spot on the board. We will continue the same steps until one person reaches "Land" and wins.

Start	1,000	2,000	3,000	4,000	5,000	6,000	Takeoff

Start	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	Takeoff

FASTEST Flight

Start					Land

INDEPENDENT REVIEW

Complete the problems.

Hundreds	Tens	Ones		Hundreds	Tens	Ones
	1	1			1	1
	2	4	6		6	8	7
+	3	5	4	+	2	6	7
	6	0	0		9	5	4

Circle the correct time.

2 HOURS FROM NOW	1 HOUR AGO
1:30 PM	5:00 PM
6:30 AM	4 PM
3:30 PM	4 AM
3:00 PM	7 PM

Write the number of days in each month. If needed, reference the poem on page 152.

April	May	June
30	31	30

Complete the problems. Write the answers in the suns.

Order the stacks of bricks from shortest to tallest by writing one of the following under each box: 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th.

6th	3rd	10th	1st	7th	5th	9th	2nd	8th	4th

Star LOGIC

Take the stars from the math box and follow the clues to place the stars on the boxes in the right places.

PUZZLE 16

Use 1 red star, 1 brown star, 1 light-green star, 1 yellow star, and 1 orange star

Clue 1: The light-green star is between the orange star and the yellow star.

Clue 2: The red star is below the light-green star and the yellow star.

Clue 3: The brown star is on the left of the red star.

PUZZLE 17

Use 1 pink star, 1 purple star, 1 dark-green star, 1 dark-blue star, and 1 light-blue star

Clue 1: The dark-green star is to the left of the pink star.

Clue 2: The purple star is on the left of the light-blue star.

Clue 3: The dark-blue star is to the right of the light-blue star.

Lesson 63

SUBTRACTION WITH REGROUPING: PART 1

Writing in the Thousands

Say the numbers in purple aloud without the child seeing them and have him or her write the numbers on the whiteboard. Remind the child to place the comma where you would say THOUSAND. 5,344 | 1,872 | 9,001

Mental Math

Have the child look at each problem below, identify if there's a doubles addition fact that can help complete the problem or not, and say the answer aloud.

14	13	10	18	8	12
- 7	- 3	- 5	- 9	- 4	- 6
7	10	5	9	4	6

Read to the child: Today you are going to learn about regrouping and borrowing in subtraction. Let's imagine you gathered 21 gifts for children in need, and you gave 13 away. To find out how many packages you have left, you write a problem like the one in the green box. Point to the ones column. You realize there is a problem. You can't subtract 3 from 1. You don't have enough ones, so you need to borrow from the tens place. Let's see how this happens.

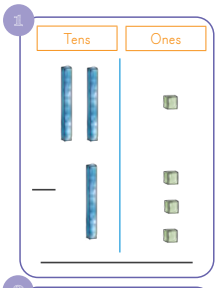
$$\begin{array}{r} 21 \\ -\ 13 \\ \hline \end{array}$$

Imagine the problem in base-10 blocks. Look at box 1 at the top of the next column. The two ten sticks at the top of the tens column show there are two tens in the number 21. We need to borrow one of those ten sticks.

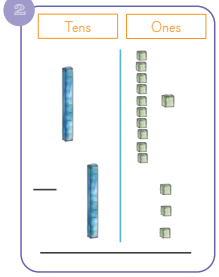
The image in box 2 on the right shows that we moved over one of the ten sticks to the ones column. How many ones are now in the ones column? [11] Can we subtract 3 from 11? [yes] How many ten sticks are left in the tens column? [1]

Let's walk through the same process with the subtraction problem in box 3 below. When we take ten from the tens column (think of taking 1 ten stick), we cross out the 2 and write 1 because 2 take away 1 is 1. We then put the number 1 beside the digit in the ones column. Now we are ready to subtract. 11 ones take away 3 ones is 8 ones. 1 ten take away 1 ten is 0 tens. So our answer is 8!

1



2



3

$$\begin{array}{r} {\scriptstyle 1}\,{\scriptstyle 1} \\ 2\,\not{1} \\ -\ 1\,3 \\ \hline 8 \end{array}$$

You do the problem in box 4 as I guide you through it.

4

$$\begin{array}{r} 5 \\ \not{6}\,3 \\ -\ 2\,4 \\ \hline 3\,9 \end{array}$$

First, look at the ones column. Can you subtract 4 from 3? No, so you need to borrow from the tens column.

Point to the 6 in the tens column. Imagine this is 6 ten sticks. You need to borrow one, so cross out the 6 and write a 5.

Next, take the ten you borrowed and write a 1 in front of the 3. Now you have 13 ones and can finish the problem!

8 (borrowed)
9̶10
− 62
28

I'll guide you through one more problem on the left before we play a game.

First, look at the ones column. Can you subtract 2 from 0? No, so you need to borrow from the tens column.

Point to the 9 in the tens column. Imagine this is 9 ten sticks. You need to borrow one, so cross out the 9 and write an 8.

Next, take the 10 you borrowed and write a 1 in front of the 0 in the ones column for a total of 10 ones.

Now you can finish the problem.

Forest
Path of Problems

○ Read to the child: Make your way to the cabin by starting on either problem that has "Start" by it. Complete the problem, and then follow along the path, going vertically or horizontally, any way you want to reach the cabin, completing each problem as you go.

Row	Problem	Answer
1	52 − 23 (4 borrowed)	29
1	36 − 14	22
1	43 − 35 (3 borrowed)	8
1	28 − 17	11
1	33 − 27 (2 borrowed)	6
1	72 − 63 (6 borrowed)	9
1	84 − 67 (7 borrowed)	17
2 (Start)	90 − 51 (8 borrowed)	39
2	99 − 48	51
2	72 − 24 (6 borrowed)	48
2	29 − 18	11
3	83 − 67 (7 borrowed)	16
3	60 − 46 (5 borrowed)	14
3	34 − 13	21
3	72 − 54 (6 borrowed)	18
3	37 − 25	12
3	54 − 48 (4 borrowed)	6
3	End	
4 (Start)	65 − 32	33
4	84 − 55 (7 borrowed)	29
4	48 − 36	12
4	63 − 28 (5 borrowed)	35
4	68 − 43	25
4	67 − 22	45
4	85 − 63	22

INDEPENDENT REVIEW

Complete the crossword puzzle. Use number words for the answers with numbers.

Across:
1. The answer to an addition problem. Ends with "m."
2. 7 + 6
3. The number after 17
4. The double of 6
6. 11 - 10

Down:
1. 9 + 8
2. 8 - 5
5. 10 + 1

							1 s	u	m		
							e				
							v				
							e				
2 t	h	i	r	t	e	e	n			5 e	
h							t			l	
r					4 t	w	e	l	v	e	
e							e			v	
3 e	i	g	h	t	e	e	n			e	
									6 o	n	e

Fill in the missing numbers, counting by thousands.

1,000	2,000	3,000
4,000	5,000	6,000

Complete the problems.

Hundreds	Tens	Ones
1	1	
4	4	7
+3	6	4
8	1	1

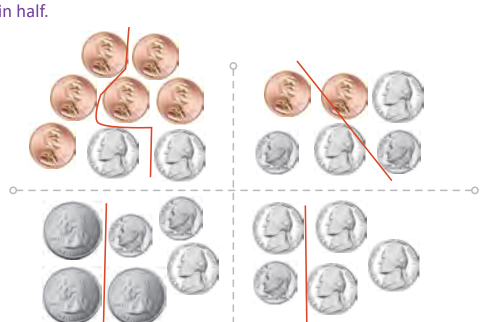
Hundreds	Tens	Ones
1	1	
4	7	3
+3	8	7
8	6	0

Hundreds	Tens	Ones
1	1	
5	8	9
+3	4	6
9	3	5

Write one of your parents' phone numbers.

Answers will vary.

Draw a line between the coins in each group to divide the total value in half.



Lesson 64

PLACE VALUE TO THE THOUSANDS

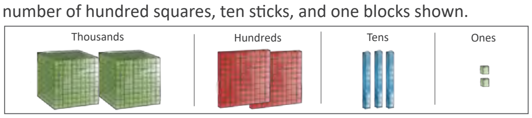
Skip Counting

Have the child skip count backward by 3s from 21 to 3.

Fractions

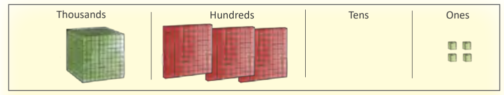
Play the "Fraction Dice Game." (Instructions are on page 145.)

○ Read to the child: Madison has been playing the flute since she was eight years old. She plays in an orchestra, and they went on tour. At the first performance on their tour, there were 2,232 people in the audience. The chart below shows 2,232 with base-10 blocks. The green cubes are thousand cubes. They each have 10 hundred squares, which is 1,000 total blocks. In the orange chart, write the number of thousand cubes in the thousands place and write a comma after the digit. Then write the number of hundred squares, ten sticks, and one blocks shown.



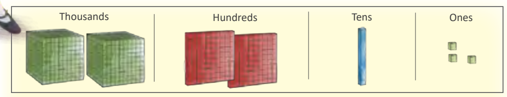
Thousands	Hundreds	Tens	Ones
2,	2	3	2

○ Read to the child: Madison played at three other churches and concert halls on her tour. Fill out the orange chart by each location to find out how many people were in the audience at each location. Then read the number aloud. Don't forget the comma after the digit in the thousands place.

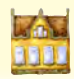


Thousands	Hundreds	Tens	Ones
1,	3	0	4

Thousands	Hundreds	Tens	Ones
3,	0	2	0



Thousands	Hundreds	Tens	Ones
2,	2	1	3



○ Read to the child: Read each number in green aloud. What digit is in the thousands place? Hundreds place? Ones place? Tens place?

9,802 8,003 7,300 4,020

INDEPENDENT REVIEW

Complete the fact family using the numbers at the top.

Complete the subtraction problems. Don't forget to borrow and regroup.

$$\begin{array}{r} \overset{7}{\cancel{8}}\,{}^{1}5 \\ -\ 47 \\ \hline 38 \end{array} \qquad \begin{array}{r} \overset{5}{\cancel{6}}\,{}^{1}6 \\ -\ 37 \\ \hline 29 \end{array} \qquad \begin{array}{r} \overset{8}{\cancel{9}}\,{}^{1}2 \\ -\ 37 \\ \hline 55 \end{array}$$

Fill in the missing number, counting by thousands.

3,000 | 4,000 | 5,000

Round each number to the nearest ten.

38	40				
31	30	39	40	32	30
35	40	34	30	37	40

Write the number of days in each month. If needed, reference the poem on page 152.

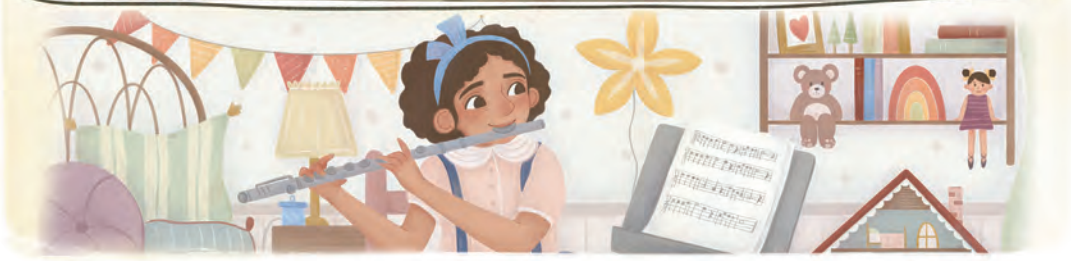
July	August	September
31	31	30

Math 2 Answer Key

Madison's Practice Book

Write the ending times on Madison's practice book. Make sure to include AM or PM.

Day of the Week	Length of Practice	Time Started	Time Ended
Monday	30 minutes	9:00 AM	9:30 AM
Tuesday	1 hour 30 minutes	8:00 AM	9:30 AM
Wednesday	1 hour 30 minutes	2:00 PM	3:30 PM
Thursday	30 minutes	5:30 PM	6:00 PM
Friday	1 hour 30 minutes	5:00 PM	6:30 PM
Saturday	30 minutes	10:00 AM	10:30 AM



Lesson 65

ADDING AND SUBTRACTING 10 AND 100 IN THE THOUSANDS

Spelling 16, 17, 18 + Numbers

- Have the child write "sixteen," "seventeen," and "eighteen" on the whiteboard.
- Have the child write 4,000, 5,672, and 6,700 on the whiteboard.

Extra Item
small bowl

○ Read to the child: To add 10 to a number, we *increase* the digit in the tens place by one. The number 3,784 is on the first chart. Point to the digit in the tens place. [8] In the next chart, write the sum of 3,784 + 10 by increasing the digit in the tens place by one. [3,794]

Thousands	Hundreds	Tens	Ones
3,	7	8	4

Thousands	Hundreds	Tens	Ones
3,	7	9	4

○ Read to the child: Add 10 to each number by increasing the digit in the tens place by one.

Thousands	Hundreds	Tens	Ones
5,	2	3	8

Thousands	Hundreds	Tens	Ones
5,	2	4	8

Thousands	Hundreds	Tens	Ones
2,	0	0	2

Thousands	Hundreds	Tens	Ones
2,	0	1	2

Thousands	Hundreds	Tens	Ones
9,	5	6	6

Thousands	Hundreds	Tens	Ones
9,	5	7	6

○ Read to the child: To subtract 10 from a number, we *decrease* the digit in the tens place by one. Subtract 10 from each number by decreasing the digit in the tens place by one.

Thousands	Hundreds	Tens	Ones
1,	2	3	4

Thousands	Hundreds	Tens	Ones
1,	2	2	4

Thousands	Hundreds	Tens	Ones
6,	8	7	4

Thousands	Hundreds	Tens	Ones
6,	8	6	4

○ Read to the child: To add 100 to a number, we *increase* the digit in the hundreds place by one. Add 100 to each number by increasing the digit in the hundreds place by one.

Thousands	Hundreds	Tens	Ones
6,	6	4	3

Thousands	Hundreds	Tens	Ones
6,	7	4	3

Thousands	Hundreds	Tens	Ones
3,	3	3	2

Thousands	Hundreds	Tens	Ones
3,	4	3	2

Thousands	Hundreds	Tens	Ones
3,	1	3	0

Thousands	Hundreds	Tens	Ones
3,	2	3	0

○ Read to the child: To subtract 100 from a number, we *decrease* the digit in the hundreds place by one. Subtract 100 from each number by decreasing the digit in the hundreds place by one.

Thousands	Hundreds	Tens	Ones
3,	5	7	4

Thousands	Hundreds	Tens	Ones
3,	4	7	4

Thousands	Hundreds	Tens	Ones
3,	6	0	3

Thousands	Hundreds	Tens	Ones
3,	5	0	3

Take the squares 1–8 from the math box and put them in a bowl. Read to the child: We are going to play a game. We will each randomly take four numbers out of the bowl and arrange them to make the greatest number possible. We will each write the number we create in the first box in our column below. Then we will follow the instructions to write in the yellow box the number that is 100 more or less or 10 more or less than the number we created. The person with the larger number in the yellow box wins that round and gets to fill in the circle. We'll then put all the numbers back in the bowl and repeat the steps. The person with the most circles filled in at the end of the game wins. This is a game of chance, and it is not important who wins; it's just important to have fun!

Who Has the Larger Number? Game

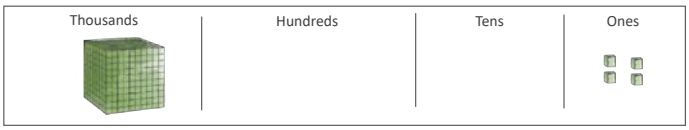
Child			Parent/Teacher		
Create Your Number		10 more	Create Your Number		10 more
Create Your Number		10 less	Create Your Number		10 less
Create Your Number		100 more	Create Your Number		100 more
Create Your Number		100 less	Create Your Number		100 less

Answers will vary.

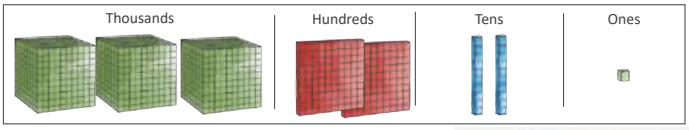
INDEPENDENT REVIEW

Jamar Goes on Tour!

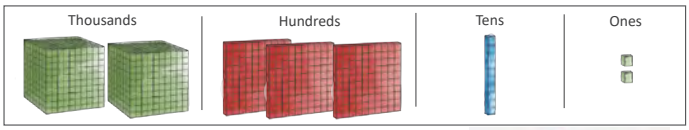
Jamar loves to sing and is in a touring choir. Fill out the orange charts by each location to find out how many people were in the audience at each location. Then read the number aloud. Don't forget the comma after the digit in the thousands place.



Thousands	Hundreds	Tens	Ones
1,	0	0	4



Thousands	Hundreds	Tens	Ones
3,	2	2	1



Thousands	Hundreds	Tens	Ones
2,	3	1	2

Bird *Song*

By each bird draw a line to divide the musical notes into two equal groups. If there is one left over, circle it.

Circle the time shown on the clock.

Tim is sleeping at night.

quarter to 3:00 PM

quarter past 3:00 AM

quarter to 3:00 AM (circled)

Write and complete the problem for the story.

Last year, Jemma played her French horn in 30 concerts. This year, she has played in 15 concerts. How many more concerts did she play in last year?

30 − 15 = 15

Complete the subtraction problems. Don't forget to borrow and regroup.

$\overset{6}{\cancel{7}}\overset{1}{4} - 37 = 37$	$\overset{4}{\cancel{5}}\overset{1}{3} - 38 = 15$	$\overset{6}{\cancel{7}}\overset{1}{3} - 26 = 47$

Write the number that answers each question.

How many days are in a week?	How many seconds are in a minute?	How many minutes are in an hour?	How many hours are in a day?	How many days are in February in a leap year?	How many months are in a year?	How many weekdays are in a week?
7	60	60	24	29	12	5

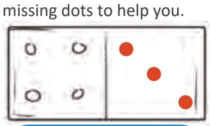
Lesson 66

MISSING NUMBERS IN ADDITION PROBLEMS

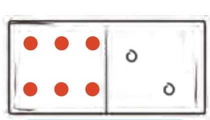
Spelling 16, 17, 18 & Numbers

- Have the child write "sixteen," "seventeen," and "eighteen" on the whiteboard. Show him or her how you just write TEEN to SIX and SEVEN, and EEN to EIGHT.
- Have the child write "7,804" on the whiteboard.

○ Read to the child: ***Addends*** are the numbers added in an addition problem. In the problem 1 + 2 = 3, the addends are 1 and 2. What are the addends in 3 + 4 = 7? When you have a missing addend in an addition problem, you can start with the addend you know and count how many more you need to get to the sum (the answer). Fill in the missing addends below. If desired, draw the number of missing dots to help you.

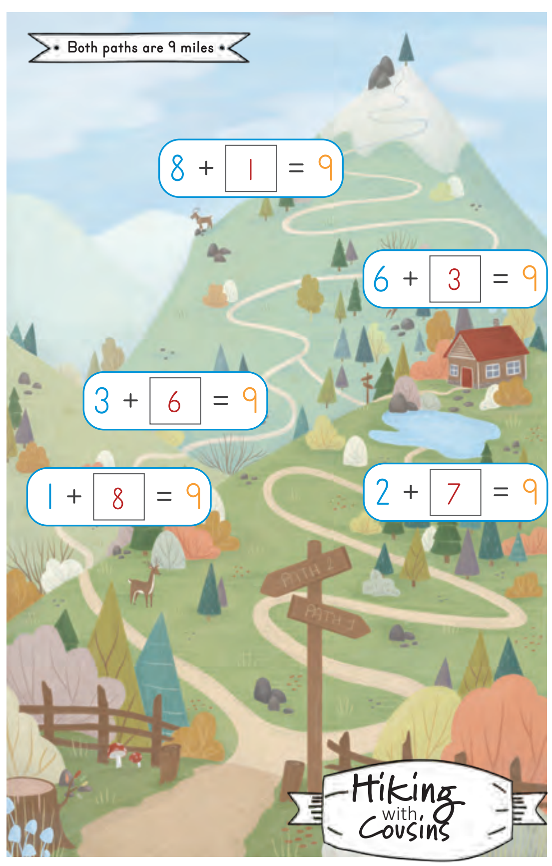


4 + 3 = 7



6 + 2 = 8

○ Read to the child: You and your cousins go on two hikes, taking different paths. One of your cousins, Ann, keeps asking you how many more miles you have left to go. At each point on the trail with a problem, the sum (in orange) shows the total number of miles in the hike, which is 9. The addend in blue shows how many miles you have gone. Fill in the blank box with the number of miles you still have to go.



INDEPENDENT REVIEW

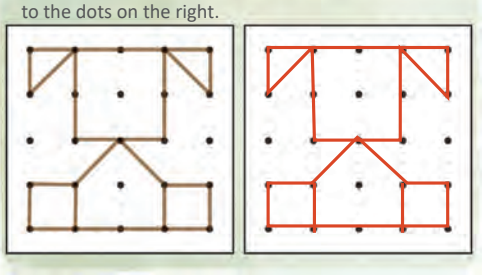
Fill in the missing boxes. The first one is completed as an example.

	100 less		
	3,332		
10 less	3,422	3,432	3,442
	3,532		10 more
	100 more		

	100 less		
	2,246		
10 less	2,336	2,346	2,356
	2,446		10 more
	100 more		

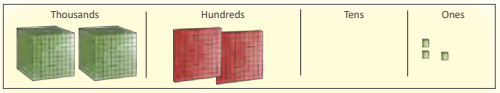
PEG Patterns

Use a colored pencil to copy the design on the left to the dots on the right.



Complete the subtraction problems. Don't forget to borrow and regroup.

$\overset{6}{\cancel{7}}\overset{1}{5} - 47 = 28$	$\overset{7}{\cancel{8}}\overset{1}{3} - 44 = 39$	$\overset{6}{\cancel{7}}\overset{1}{6} - 19 = 57$	$\overset{4}{\cancel{5}}\overset{1}{0} - 31 = 19$



In the orange chart, write the number shown by the base-10 blocks.

Thousands	Hundreds	Tens	Ones
2,	2	0	3

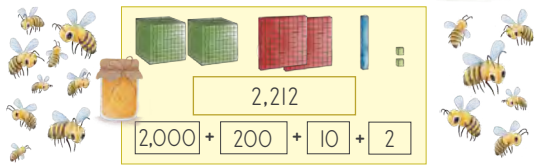
Lesson 67

EXPANDED FORM TO THE THOUSANDS

Skip Counting

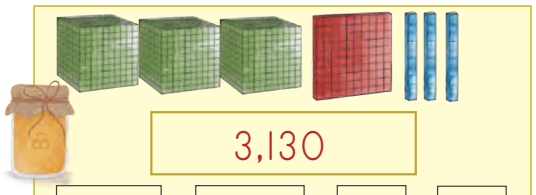
Have the child skip count backward by 3s from 21 to 3.

○ Read to the child: Mrs. Romero is a beekeeper and loves the work she does. It takes a lot of bees and a lot of flowers to make honey. Write the standard form and expanded form to show how many bees it took to make the honey in each jar. The first one is completed as an example.



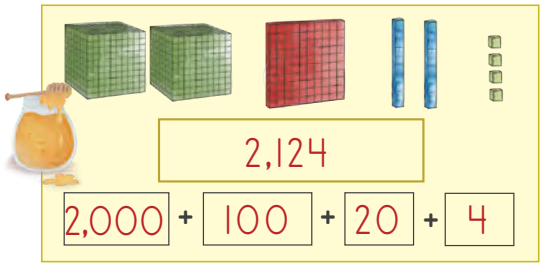
2,212

2,000 + 200 + 10 + 2



3,130

3,000 + 100 + 30 + 0



2,124

2,000 + 100 + 20 + 4

1,306

1,000 + 300 + 0 + 6

Larger Number Challenge

○ Take the numbers from the math box. Read to the child: Let's play a game with three rounds. For each round we will each randomly choose five numbers and create th… we can using any four of th…

Answers will vary.

…wrote the expanded …erson scores a point. You cannot use the …number more than once.

INDEPENDENT REVIEW

Help each bee get over the honeycomb to reach the flower. Add two numbers that are side by side and write the answer in the hexagon above them. Continue until you reach the flower. The first one is done for you.

On each orange chart, write the digit in each place value shown by the base-10 blocks or the number. Don't forget the commas.

Thousands	Hundreds	Tens	Ones
1,	1	8	0

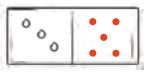
6,043

Thousands	Hundreds	Tens	Ones
6,	0	4	3

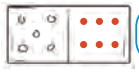
9,053

Thousands	Hundreds	Tens	Ones
9,	0	5	3

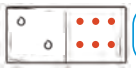
Fill in the missing addend. If needed, draw the missing number of dots on the domino to help you find the answer.



3 + 5 = 8

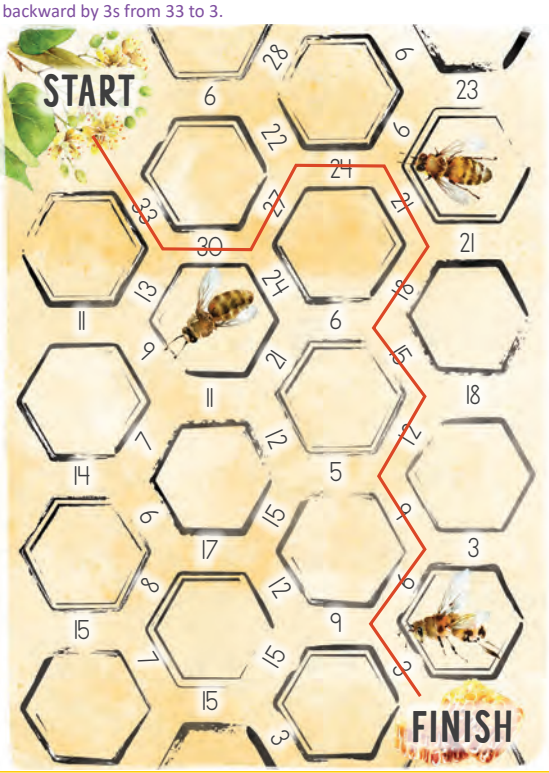


5 + 6 = 11



2 + 6 = 8

Draw a line through the maze by following the path that skip counts backward by 3s from 33 to 3.



Write the correct time.

2 HOURS FROM NOW	1 HOUR AGO
3:00 PM	2:00 AM
5:00PM	1:00AM

Write the number of days in each month. If needed, reference the poem on page 152.

July	August	September
31	31	30

Write and complete the problem for the story.

Here is a mother cat and her kitten. The mother's tail is 20 centimeters long. The kitten's tail is 10 centimeters long. How much longer is the mother's tail than the kitten's tail?

20 cm - 10 cm = 10 cm

Lesson 68

ESTIMATING WITH SUBTRACTION

Spelling Numbers

Have the child write "eleven," "sixteen," "seventeen," and "eighteen" on the whiteboard.

○ Read to the child: In some caves, water drips from the ceiling over many years, forming stalagmites on the cave floor, as shown on the right. We are going to practice subtracting one number from another and rounding the answer to the nearest ten. Look at the example in the blue box on the right. Complete the subtraction problems below on a whiteboard (write them vertically—up and down), and then round the answer to the nearest ten and write it in the stalagmite. Remember, when rounding to the nearest ten, a number ending in five or greater rounds up.

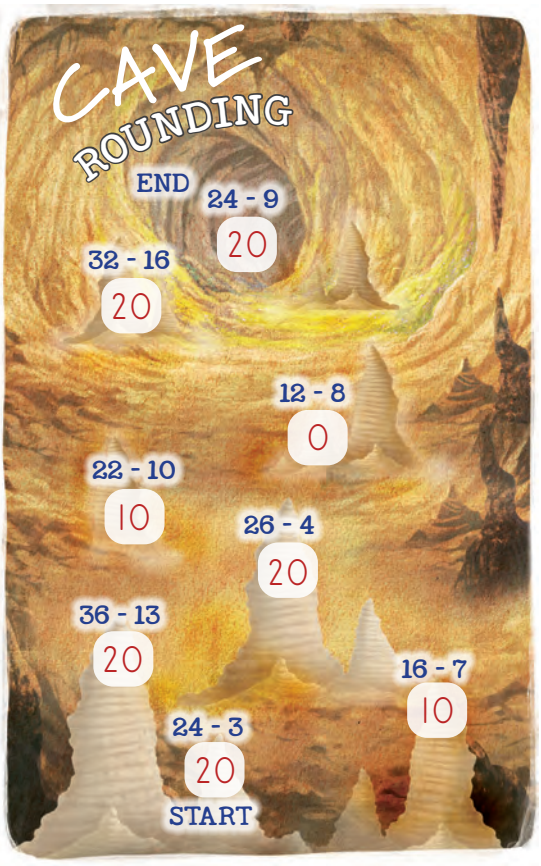
27 - 13 = 14
14 rounded to the nearest ten is 10

24 - 11 → 10

18 - 2 → 20

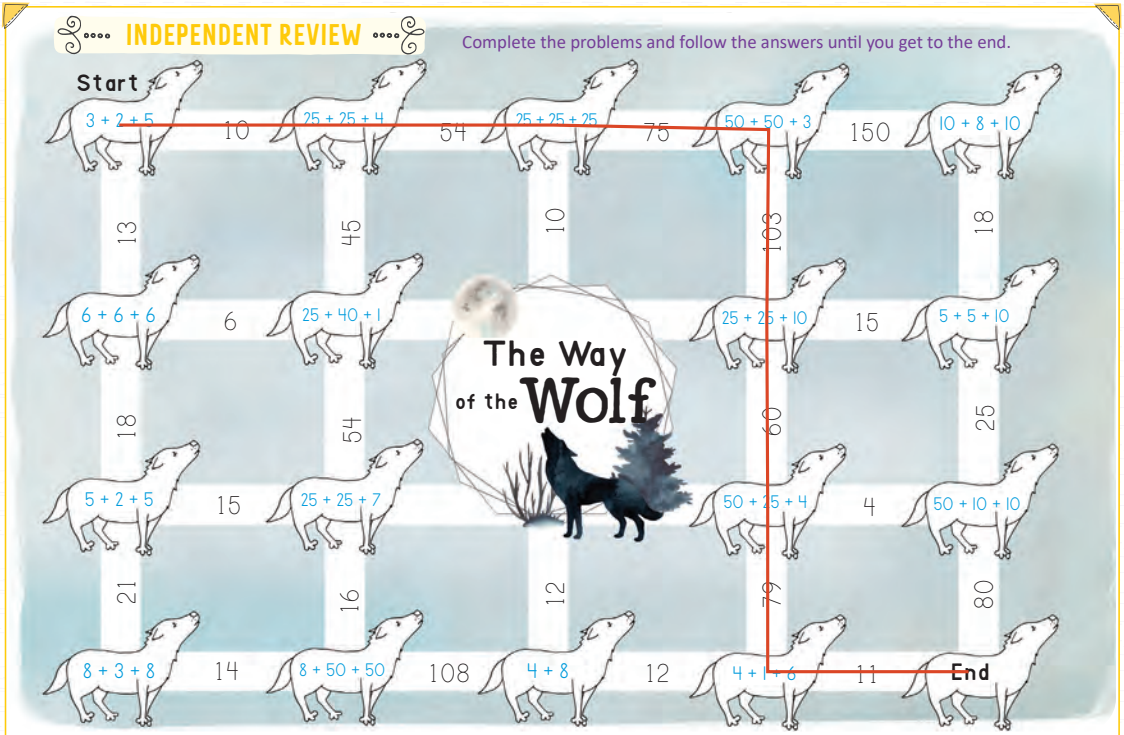
36 - 15 → 20

○ Read to the child: Make your way out of the cave on this page by completing each subtraction problem on a whiteboard. Then write each answer rounded to the nearest ten in the box.



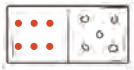
INDEPENDENT REVIEW

Complete the problems and follow the answers until you get to the end.



Fill in the missing addend. If needed, draw the missing number of dots on the domino to help you find the answer.

1 + 6 = 7



6 + 5 = 11

2 + 3 = 5

INDEPENDENT REVIEW

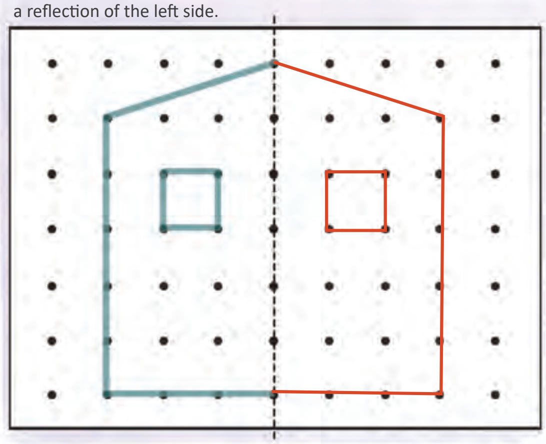
Fill in the missing boxes. The first one is completed as an example.

	100 less	
	3,332	
10 less: 3,422	3,432	3,442 :10 more
	3,532	
	100 more	

	100 less	
	4,163	
10 less: 4,253	4,263	4,273 :10 more
	4,363	
	100 more	

PEG Patterns — Symmetry

Use a colored pencil to complete the right side of the design. Make it a reflection of the left side.



Check Your Addition Problems with Subtraction

$5 + 4 = 9$ → $9 - 4 = 5$

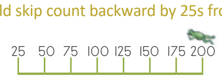
$5 + 3 = 8$ → $8 - 3 = 5$

Lesson 69

MONEY PRACTICE

Skip Counting

- Have the child skip count by 3s from 3 to 21.
- Have the child skip count backward by 25s from 200 to 25.



Mental Math

Have the child identify if the problem is doubles addition plus one or not and say the answer aloud.

$8 + 7 = 15$ $6 + 3 = 9$ $7 + 6 = 13$ $9 + 8 = 17$ $5 + 6 = 11$

○ Read to the child: Point to each coin below and say its name and its value.

○ Take a variety of money from the math box. Read to the child: I will name a coin or bill, and you pick it out of the pile of money. If you choose the correct one, you get to keep it. After five turns you will add up the money you have. Say the names of different coins and bills. Repeat the activity but say the value of the coins or bills. Repeat as often as desired.

○ Read to the child: You and your family have been trying to raise money for a school in Africa. You love learning and want to help other children have opportunities to learn too. Your family put on a bake sale, and now you are counting the money earned. Create two piles of money in front of you. Count the money in each pile and write the totals in the blue boxes. Then draw a greater than, less than, or equal sign between the boxes to compare the totals. Do the same for the yellow boxes.

$. ○ $.

$. ○ $.

Answers will vary.

Pennies for AFRICA

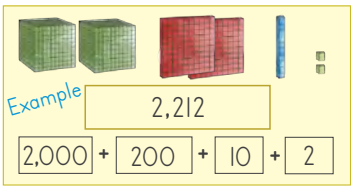
○ Read to the child: We are going to play a game to see who earned the most money fundraising for the African school. We will each take turns closing our eyes and reaching to the pile of money. The first thing you touch is added to your pile. When all the money ... we will add up our m... ...ost, but wa... ...tracted from your total. We w... ...n write our totals in the box. Play up to three times.

Answers will vary.

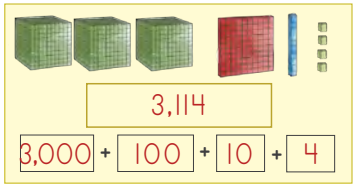
Child	Teacher
$.	$.
$.	$.
$.	$.

INDEPENDENT REVIEW

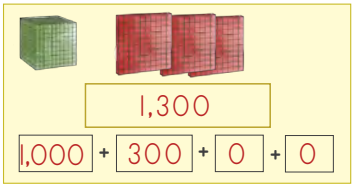
Write the standard form and expanded form for each set of base-10 items.



Example: 2,212 = 2,000 + 200 + 10 + 2



3,114 = 3,000 + 100 + 10 + 4



1,300 = 1,000 + 300 + 0 + 0

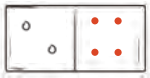
Complete the subtraction problems. Don't forget to borrow and regroup.

4 / 5 3 − 47 = 6	8 / 9 4 − 47 = 47	6 / 7 6 − 28 = 48

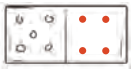
Write the number of days in each month. If needed, reference the poem on page 152.

August	September	July
31	30	31

Fill in the missing addend. If needed, draw the missing number of dots on each domino to help you find the answer.



2 + 4 = 6



5 + 4 = 9

3 + 5 = 8

Lesson 70

SUBTRACTION WITH REGROUPING: PART 2

Skip Counting

Have the child skip count backward by 3s from 30 to 3. Use the chart if needed.

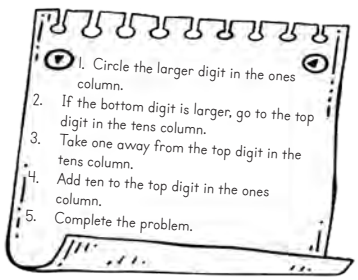
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Mental Math

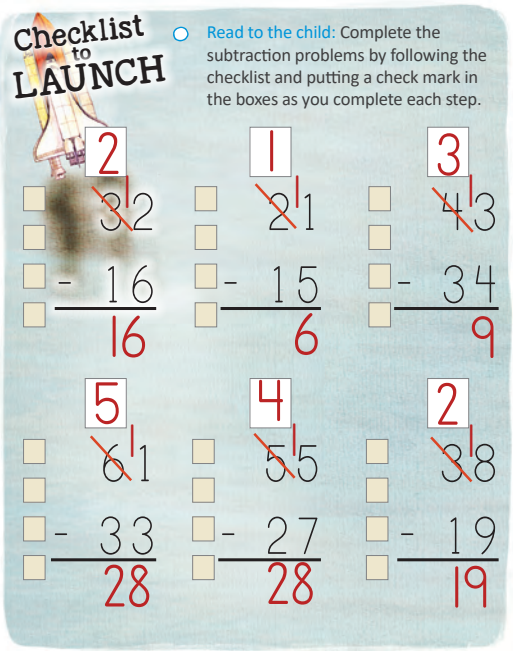
Have the child add 100 to each number by increasing the digit in the hundreds place by 1.

6,780	5,235	4,003	3,210
6,880	5,335	4,103	3,310

○ Read to the child: Before blasting off into space, a rocket has to go through a checklist. Go through the checklist below to complete the subtraction problem with regrouping.



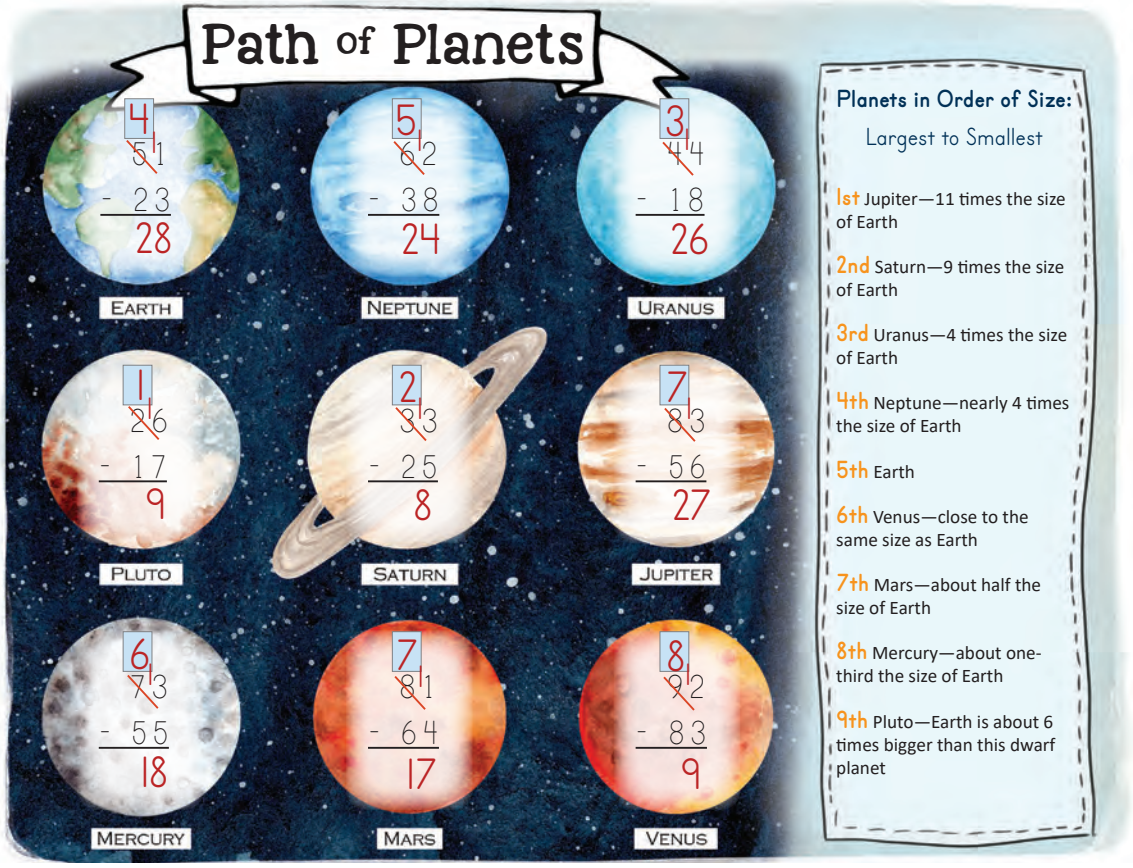
Tens	Ones
5	12
6	2
− 4	5
1	7



○ Read to the child: Complete the subtraction problems by following the checklist and putting a check mark in the boxes as you complete each step.

○ Take the rocket from the math box and give it to the child.
Read to the child: You are going to do an activity called "Path of Planets" on the next page. You will use the key to follow the order of planets from largest to smallest. Pluto is a dwarf planet and not one of the eight planets in our solar system. Place the rocket on the largest planet, complete the problem, and then move the rocket to the next largest planet, complete the problem on the planet, and then move to the next largest planet and so on until you have visited each planet and Pluto.

Path of Planets



Planets in Order of Size:
Largest to Smallest

1st Jupiter—11 times the size of Earth

2nd Saturn—9 times the size of Earth

3rd Uranus—4 times the size of Earth

4th Neptune—nearly 4 times the size of Earth

5th Earth

6th Venus—close to the same size as Earth

7th Mars—about half the size of Earth

8th Mercury—about one-third the size of Earth

9th Pluto—Earth is about 6 times bigger than this dwarf planet

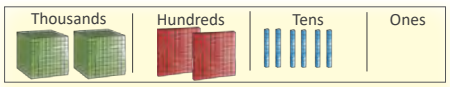
INDEPENDENT REVIEW

Circle the two birds that are exactly the same.

Complete the subtraction problems. Don't forget to borrow and regroup.

6 7 5 − 47 = 28	7 8 3 − 44 = 39	6 7 6 − 19 = 57	4 5 0 − 31 = 419

On each orange chart, write the digit in each place value shown by the base-10 blocks or the number. Don't forget the commas.



Thousands	Hundreds	Tens	Ones
2,	2	6	0

4,070

Thousands	Hundreds	Tens	Ones
4,	0	7	0

3,456

Thousands	Hundreds	Tens	Ones
3,	4	5	6

Star LOGIC

Take the stars from the math box and follow the clues to place the stars on the boxes in the right places.

PUZZLE 18

Use 1 pink star, 1 red star, 1 light-green star, 1 yellow star, and 1 dark-green star.

Clue 1: The yellow star is between the pink star and the red star.

Clue 2: The dark-green star is below the red star and the yellow star.

Clue 3: The light-green star is on the left side of the dark-green star.

PUZZLE 19

Use 1 brown star, 1 light-blue star, 1 dark-blue star, 1 purple star, and 1 pink star.

Clue 1: The light-blue star is between the dark-blue star and the purple star.

Clue 2: The brown star is below the dark-blue star.

Clue 3: The pink star is on the right side of the brown star.

Lesson 71

DIVIDING INTO GROUPS

Writing Numbers & Expanded Form

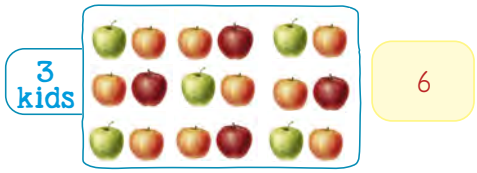
- Have the child write "7,804" and "9,004" on the whiteboard.
- Have the child write the expanded form for 5,326.

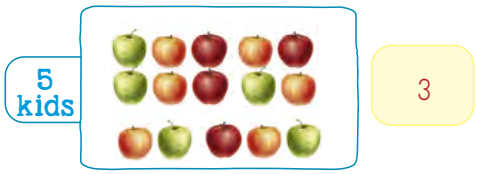
○ Take the stars from the math box. Show the child any four stars. Read to the child: We have four stars here. I am going to pass out one star to each of us until they are gone. Pass out the stars. We now have the same number of stars. How many do we each have? We divided them into equal groups. When we divide, we split numbers or items into equal groups. Collect all the stars. Now look at these 10 stars. Let's each grab one at the same time and repeat until there are no stars left. How many do we each have?

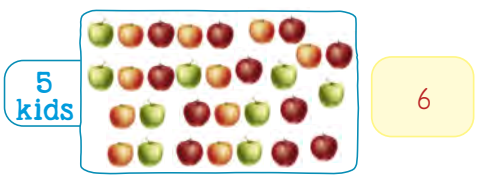
○ Read to the child: A homeschool group decided to pick apples at an orchard. Different groups of friends decided to pick apples together. Each group puts all the apples in one basket and will divide up the apples at the end so everyone in the group gets an equal share.

The first group has two children. Draw two circles on the whiteboard to represent the two children. Draw one tally mark in each circle by going back and forth until you have drawn a tally mark for each apple as you cross off the apples. Write the total number of apples each child in the group gets in the yellow box.

Follow the same process for the following exercises. For example, the first exercise has three children, so you will draw three circles on the whiteboard and then draw one tally mark in each circle back and forth until you have drawn a tally mark for each apple. The final number of tally marks in each circle shows how many apples each child in the group receives.







INDEPENDENT REVIEW

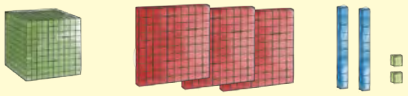
Complete the subtraction problems. Don't forget to borrow and regroup.

$\begin{array}{r} 5 \\ 6\not{2} \\ -\ 45 \\ \hline 17 \end{array}$	$\begin{array}{r} 6 \\ 7\not{3} \\ -\ 36 \\ \hline 37 \end{array}$	$\begin{array}{r} 7 \\ 8\not{1} \\ -\ 27 \\ \hline 54 \end{array}$

Round each number to the nearest ten.

42	40				
45	50	43	40	49	50
47	50	44	40	46	50

Write the standard and expanded forms shown by the base-10 blocks and the number word.



1,322

1,000 + 300 + 20 + 2

six thousand, one hundred forty-two

6,142

6,000 + 100 + 40 + 2

Fill in the missing numbers, counting by 1s. Don't forget the commas.

2,996	2,997	2,998	2,999	3,000

Lesson 72

DIVIDING INTO TWO EQUAL GROUPS WITH AND WITHOUT ONE LEFT OVER

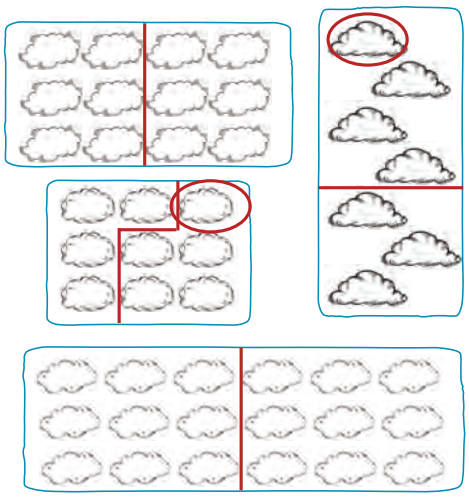
Skip Counting

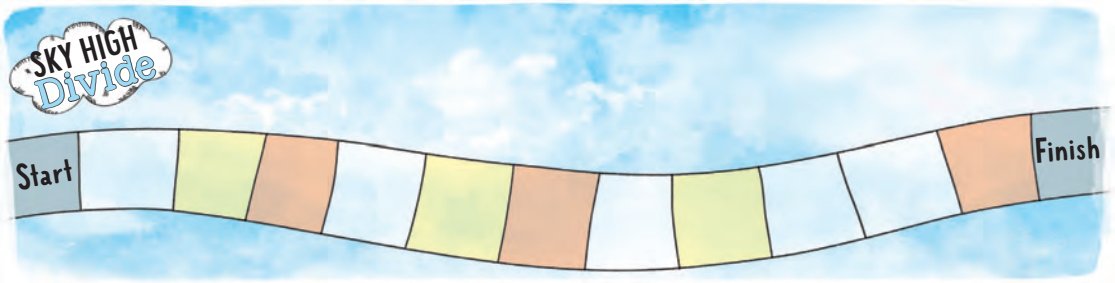
- Have the child skip count backward by 3s from 21 to 3.
- Have the child skip count backward by 25s from 125 to 25.

○ Take the stars from the math box. Read to the child: I'll pick up four stars. Now I will give each of us a star until they are gone. Pass out the stars. We each have two stars, an equal number of stars. Let's try doing the same thing with 5 stars. Pass out the stars. As you can see, we can't divide five into two equal parts. We have two equal groups of two and one left over.

○ Take an airplane and the 10-sided dice from the math box. Read to the child: Place your airplane on "Start." Roll the dice. If the number you roll can be divided equally into two groups, then you will move forward two spaces on the game board. (Hint: Even numbers can be divided evenly by two.) If you roll a number that cannot be divided equally and has one left over, then you will stay where you are. Continue rolling and moving until you reach the finish line. Repeat as many times as desired.

○ Read to the child: Look at the groups of clouds below. Draw a line to divide each group of clouds into two even sets. If there is one left over, circle it.





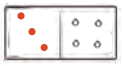
INDEPENDENT REVIEW

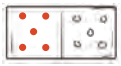
Write and complete the problem for the story.

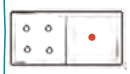
The airplane's front wings together are 50 yards wide. Its back wings together are 20 yards wide. How many yards wider are the front wings than the back wings?

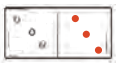
50 yd − 20 yd = 30 yd

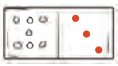
Fill in the missing addend. If needed, draw the missing number of dots on each domino to help you find the answer.


3 + 4 = 7


5 + 5 = 10


4 + 1 = 5


3 + 3 = 6


7 + 3 = 10


5 + 3 = 8

Complete the problems.

Hundreds	Tens	Ones
	1	1
	5	3	8
+	2	7	3
	8	1	1

Hundreds	Tens	Ones
	1	
	3	6	2
+	4	7	7
	8	3	9

Hundreds	Tens	Ones
	1	
	4	7	4
+	3	4	3
	8	1	7

Circle the correct time.

3 HOURS FROM NOW	2 HOURS AGO	HALF AN HOUR AGO
2:00 PM	7:30 PM	5:30 PM
1:30 AM	5:30 AM	5 PM
4:30 PM	5:30 PM	4 AM
5 PM	9 PM	8 PM

Fill in the missing numbers, counting by 1s. Don't forget the commas.

1,645 | 1,646 | 1,647 | 1,648

Circle the jars with numbers that can be divided equally, which are even numbers (numbers that end with 0, 2, 4, 6, or 8).

Lesson 73

ROUNDING WITH ADDITION

Time

Take the clock from the math box and have the child set the following times on the clock.

4:25 4:27 6:40 6:50 6:58 7:10 7:16

Read to the child: You have learned how to round numbers to the nearest multiple of 10. We are going to practice adding two numbers together and rounding the answer to the nearest ten. Read the information in the box to the right to me. Now complete the addition problems on the rain boots in your mind, and then round the answer to the nearest ten and write it in the puddle below. Remember, when rounding to the nearest ten, a number ending in five or greater rounds up.

4 + 4 = 8
8 rounded to the nearest ten is 10

Take the 6-sided dice from the math box. Read to the child: We are going to do an activity called "Rounding in the Rain." Roll the dice and write the number in the second box above each umbrella. Add that number to the number provided. Then round the answer to the nearest 10 and write it in the blue box. Repeat for all the umbrellas.

INDEPENDENT REVIEW

Fill in the missing boxes.

	10 less	
	1,449	
1 less	1,458	1,459	1,460	1 more
	1,469	
	10 more	

Write a fraction to show the shaded part of each shape. Below the line write the total number of equal parts shown on each shape. Above the line write the number of parts that are shaded.

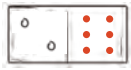
$\frac{1}{2}$ $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$

Color each flag to create an ABB color pattern [for example, blue (A), red (B), red (B)].

Fill in the missing addend. If needed, draw the missing number of dots on each domino to help you find the answer.

1 + 4 = 5

4 + 5 = 9



2 + 6 = 8

Complete the subtraction problems. Don't forget to borrow and regroup.

4 5 13 − 37 = 16	7 8 12 − 45 = 37	8 9 14 − 39 = 55	6 7 15 − 58 = 17

Circle the clouds that have an even number of raindrops under them, which means they can be divided equally into two groups.

Lesson 74

ADDING 3 TWO-DIGIT NUMBERS

Skip Counting

Have the child skip count by 4s from 4 to 28 once or twice. If needed, have the child use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Mental Math

Have the child add 100 to each number.

500 + 100	3,000 + 100	5,100 + 100
600	3,100	5,200

Read to the child: How many digits does the number 8 have? [1] How many digits does the number 100 have? [3] Today you are going to practice adding together 3 two-digit numbers. Any addition problem can be written horizontally like the one in the orange box. Go ahead and complete it by counting by 25s. Write the answer after the equal sign.

25 + 25 + 25 = 75

That problem was pretty easy because you could skip count by 25s and complete the problem mentally, but look at how much more difficult the problem in the blue box would be to complete mentally. (You don't need to complete it.)

97 + 15 + 43 = 155

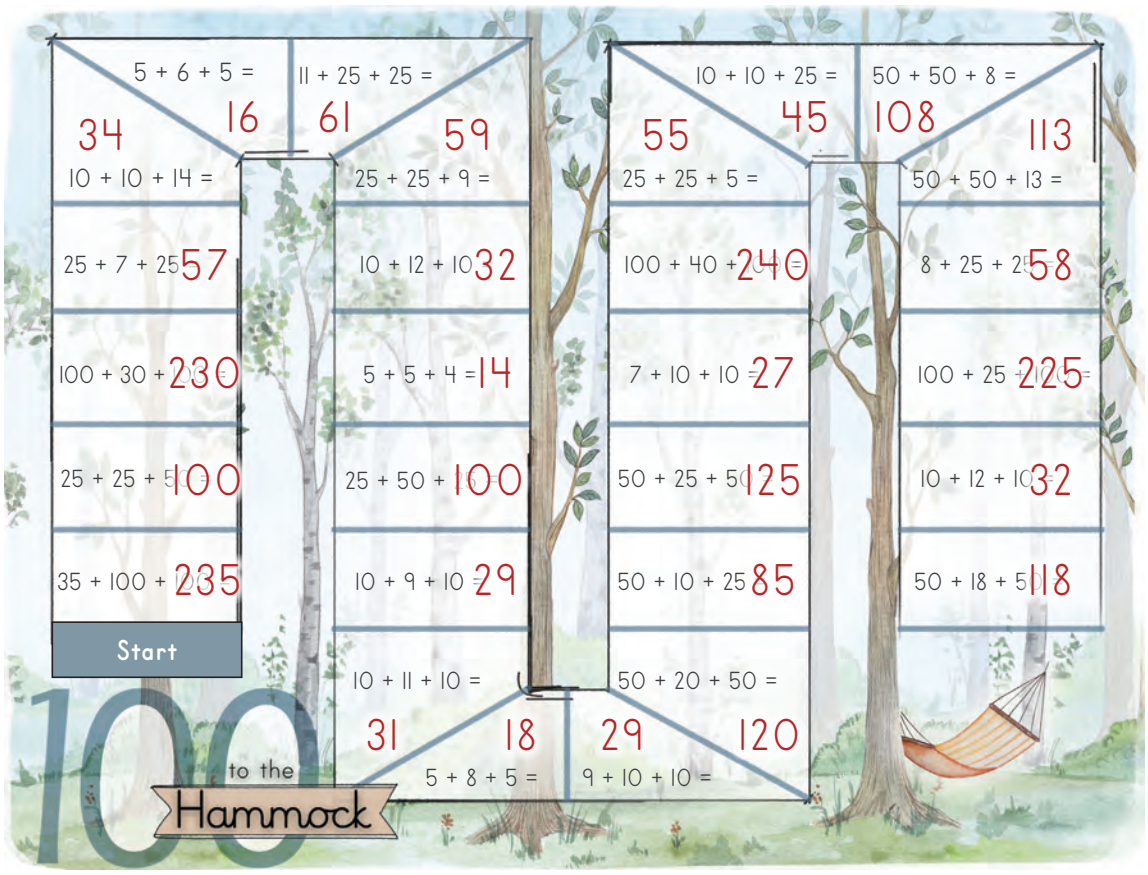
You can also write the problem vertically. Start in the ones column. Since it does not matter in what order you add the digits, it can help to look for any two digits that add to 10 (like 7 and 3 in this problem) because it is easy to add the last digit to 10. Add the digits in the numbers in the ones column. (Remember to carry the 1 to the tens column.) Now add the digits in the tens column. See how the 9 and 1 equal ten. You can easily add the 4 and the carried 1 to 10 to get 15. The answer to this problem is 155.

$$\begin{array}{r} 97 \\ 15 \\ +\ 43 \\ \hline 155 \end{array}$$

Read to the child: Complete these problems by first adding the digits in the ones column and then the digits in the tens column. Before adding the digits in each column, look for two digits that together equal 10 and connect them with a curved line.

$$\begin{array}{r} 39 \\ 65 \\ +\ 41 \\ \hline 145 \end{array} \qquad \begin{array}{r} 58 \\ 72 \\ +\ 56 \\ \hline 186 \end{array} \qquad \begin{array}{r} 34 \\ 15 \\ +\ 76 \\ \hline 125 \end{array}$$

Take the 10-sided dice and any two stars from the math box.
Read to the child: Let's play "100 to the Hammock." We will each place a star on "Start." You go first. Roll the dice and move that many spaces. Mentally complete the problem you land on and say the answer aloud. If the sum is greater than 100, you go again. Continue until you reach a problem that does not have a sum greater than 100. Then it is my turn. The first person to get to the hammock wins! To complete the problems, use mental math by first skip counting by 5s, 10s, 25s, 50s, or 100s, and then add the remaining number. Repeat as many times as desired.



INDEPENDENT REVIEW

Circle the backpacks with numbers that can be divided equally in two groups, which are even numbers (numbers that end with 0, 2, 4, 6, or 8).

Complete the subtraction problems. Don't forget to borrow and regroup.

7 / 82 − 37 = 45	6 / 72 − 38 = 34	4 / 53 − 39 = 14

Check Your Addition Problems with Subtraction

5 + 4 = 9	9 − 4 = 5	6 + 3 = 9	9 − 3 = 6

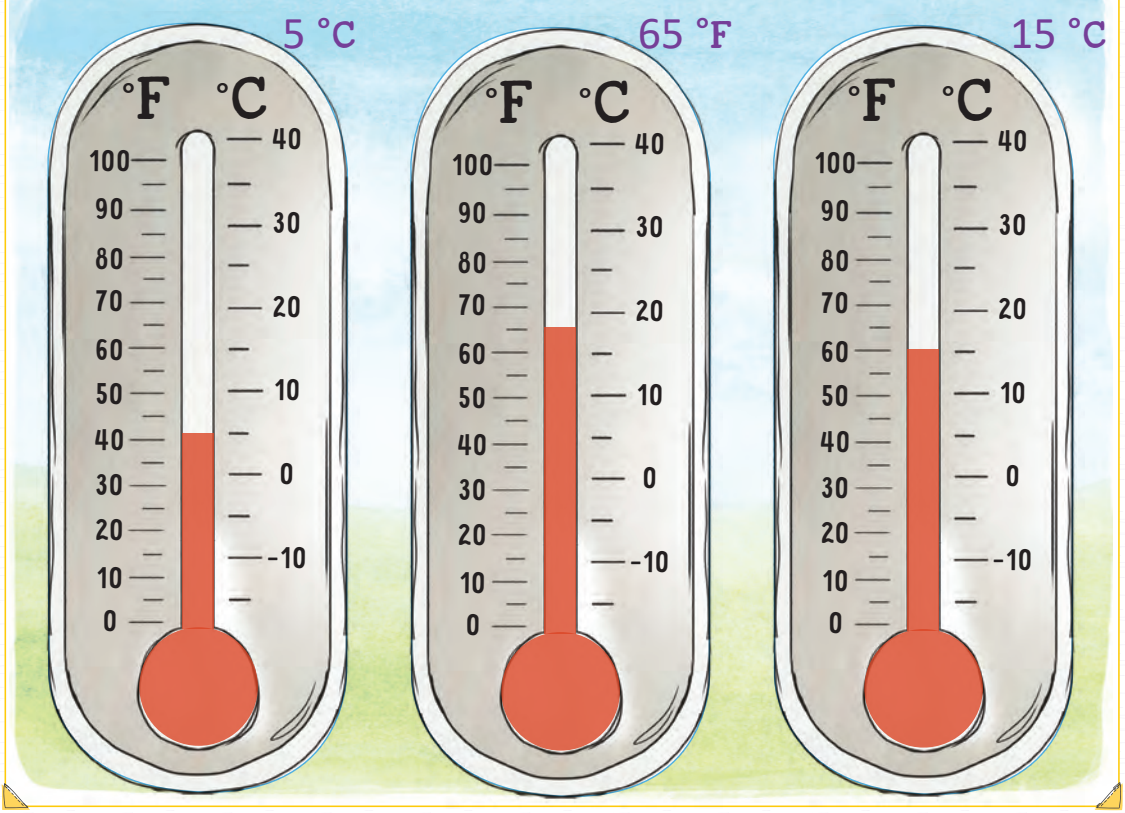
Complete the problems. Then round the sums (answers) to the nearest 10 and write them in the purple boxes.

Hundreds	Tens	Ones		Hundreds	Tens	Ones
	1					
	3	8			5	6
+	7	3	+		9	3
1	1	1		1	4	9
Rounded Sum	110		Rounded Sum	150		

Write the number of days in each month in a non-leap year. If needed, reference the poem on page 152.

January: 31	February: 28	March: 31
April: 30	May: 31	June: 30

Fill in the thermometer with a red crayon or colored pencil to the degree shown for each thermometer.



Lesson 75

POLYGONS

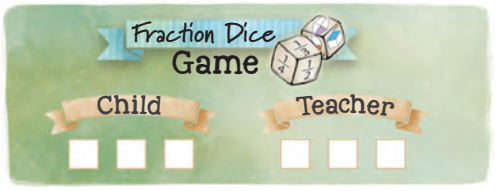
Mental Math

Read to the child: I will say problems aloud. You use the adding 9 mental math strategy to tell me each answer aloud.

9 + 10	9 + 34	65 + 9	9 + 23	81 + 9	9 + 27
19	43	74	32	90	36

Fractions

Play the "Fraction Dice Game." (Instructions are on page 145.)

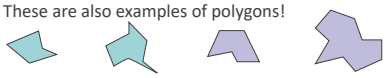


○ Read to the child: ***Polygons*** are shapes that are closed and have three or more straight sides. A rectangle is an example of a polygon. Below are more examples of shapes that are polygons. Point to each shape and say its name. Then, underneath each shape, write how many sides it has.

Some Examples of Polygons

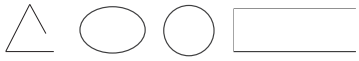
Octagon	Triangle	Pentagon	Hexagon	Square	Trapezoid
8	3	5	6	4	4

These are also examples of polygons!

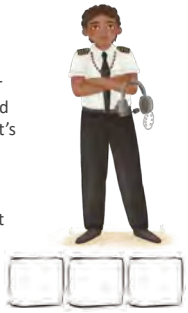


○ Read to the child: The following are not polygons because they either are not closed, or they have curved lines instead of straight lines. Point to each item and explain why it is not a polygon.

Not Polygons



○ Take the helicopter and the numbered squares 3–6 and 8 from the math box. Read to the child: This is Darius. As a child he dreamed of being a helicopter pilot. For years he has worked hard and saved money to take flight training. Let's do an activity where we imagine that Darius practices flying with his trainer by flying to islands that are shaped as polygons. To finish the game, you must win three rounds. Here is how you will play each round.



1. Fly your helicopter to any island and land on it.
2. Without looking, choose two numbers from my hand.
3. Place the two numbers that you chose on two polygon islands that have a matching number of sides. (For example, you could place a "3" on a triangle.) Say the names of the shapes.
4. On a whiteboard or paper, add together the total number of sides from the island that your helicopter is on and the total number of sides from each island that has a number on it. If the sum is more than 11, you win the round and can mark off a checkbox below Darius.

INDEPENDENT REVIEW

Complete the problems. Before adding each column, if there are two digits that together equal 10, connect them with a curved line as shown on the first problem. (You don't have to do this at other times; this is just for practicing one possible strategy.)

97	82	65	38	96	85
14	26	45	82	16	67
+ 23	+ 48	+ 26	+ 77	+ 64	+ 25
134	156	136	197	176	177

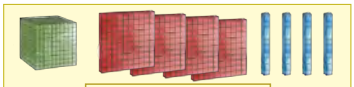
For the number represented by each group of base-10 blocks, write the number in standard and expanded form.

2,132

2,000 + 100 + 30 + 2

3,126

3,000 + 100 + 20 + 6



1,440

1,000 + 400 + 40 + 0

Complete each problem.

100 + 50 + 50 = 200	25 + 25 + 50 = 100	10 + 10 + 100 = 120	25 + 25 + 25 = 75

Your Wonderful Day!

AM starts at midnight and goes to 11:59 AM
PM starts at noon and goes to 11:59 PM

How wonderful each day is depends on your attitude, not what happens or doesn't happen to you. For each clock, write the time shown on the clock, including the AM/PM.

You are sleeping, blessed to have your blanket to cover you.

1 : 24 AM

You are walking to your friend's house to play. It is raining, but you are having fun splashing in the puddles, protected by your rain boots.

3 : 09 PM

You are eating breakfast with gratitude for something to eat, even though it is not your favorite food today.

8 : 37 AM

You are doing the dishes after dinner. It's not your favorite chore, but you work with your family and love being together.

5 : 44 PM

You are eating lunch and are nervous about an upcoming activity, but your mother encourages you, and you know you are not alone.

12 : 13 PM

You are saying your prayers before you get in bed for the night. You have so many things to thank God for.

8 : 06 PM

Lesson 76

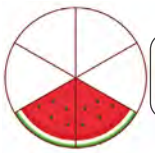
FRACTIONS: PART 3

Mental Math

Have the child look at each problem below, identify if there's a doubles addition fact that can help complete the problem or not, and say the answer aloud.

14	13	10	18	8	12
- 7	- 3	- 5	- 9	- 4	- 6
7	10	5	9	4	6

Read to the child: Miguel's family owns a watermelon farm. One day his mother slices a ring of watermelon and divides it into six equal parts. The ring of watermelon was one whole until it was cut. Each piece cut is a fraction of the whole ring. A fraction is part of a whole.



$\frac{2}{6}$

Look at this circle. How many pieces is it divided into? [6] Miguel and his sister took four of the pieces. How many pieces are left? [2] Point to the fraction $\frac{2}{6}$. Two-sixths of the watermelon ring is left. This is how we write the fraction two-sixths. Fractions have two numbers with a line between the numbers. The bottom number tells how many equal parts a whole is divided into. The top number tells how many parts we are referring to.

$\frac{3}{6}$

Write the missing fractions for these two rings of watermelon. Below the line write the total number of equal parts shown on the circle. Above the line write the number of parts left.

$\frac{4}{6}$

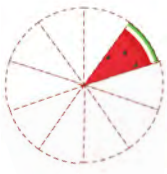
Read to the child: Fill in the circles to show each fraction.

$\frac{1}{6}$

$\frac{3}{6}$

$\frac{5}{6}$

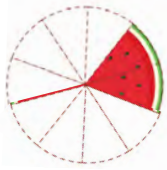
Read to the child: Miguel's younger cousins came over, and Miguel's mother sliced a ring of watermelon into 10 pieces. Write the fraction of watermelon left for these rings of watermelon. Below the line write the total number of equal parts shown on the circle. Above the line write the number of parts left.



$\frac{1}{10}$

$\frac{4}{10}$

$\frac{9}{10}$



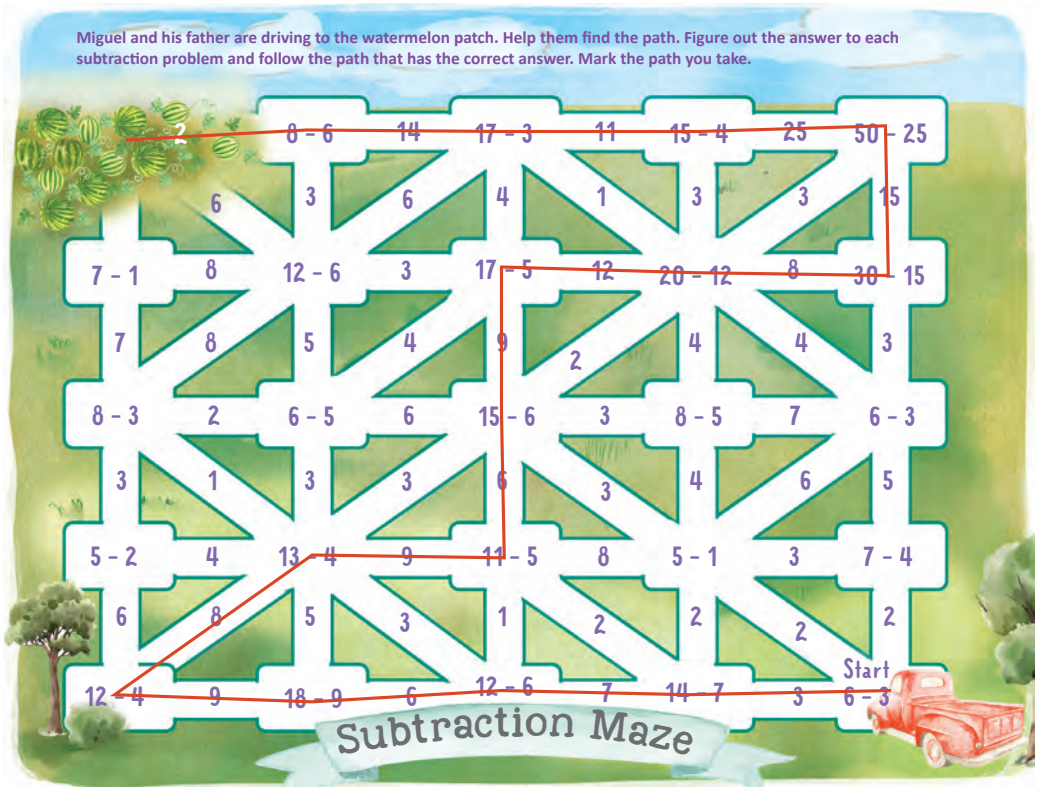
$\frac{2}{10}$

Take the numbers from the math box. Have the child create the following numbers, showing you where the comma goes:

1,652 | 3,012 | 5,903

INDEPENDENT REVIEW

Miguel and his father are driving to the watermelon patch. Help them find the path. Figure out the answer to each subtraction problem and follow the path that has the correct answer. Mark the path you take.



INDEPENDENT REVIEW

Complete the problems. Then round the differences (answers) to the nearest 10 and write them in the purple boxes.

97 − 73 = 24	86 − 74 = 12
Rounded Difference: 20	Rounded Difference: 10

Complete the problems. Before adding each column, if there are two digits that together equal 10, connect them with a curved line as shown on the first problem. (You don't have to do this at other times; this is just for practicing one possible strategy.)

98	55	86	27
17	15	62	33
+ 62	+ 64	+ 26	+ 76
177	134	174	136

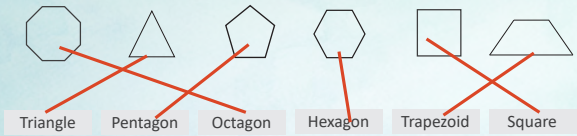
Write the number of days in each month. If needed, reference the poem on page 152.

July	August	September	March
31	31	30	31

Fill in the missing boxes.

	10 less: 6,562	
1 less: 6,571	6,572	1 more: 6,573
	10 more: 6,582	

Draw a line from each shape to its name. (Hints: "Octa-" means 8. "Hexa-" means 6. "Penta-" means 5.)



Lesson 77

FRACTIONS: PART 4

Skip Counting

Have the child skip count by 4s from 4 to 28 once or twice. If needed, have the child use the chart.

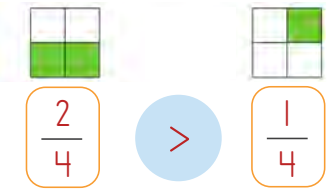
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Mental Math

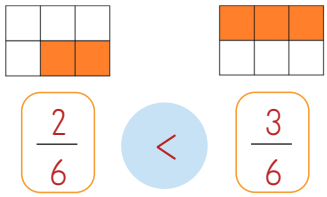
Have the child add 100 to each number.

500 + 100	2,000 + 100	4,300 + 100
600	2,100	4,400

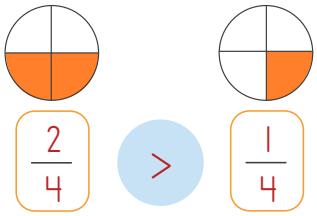
Read to the child: Today you are going to compare fractions. For each set of shapes, write the fraction of the shape that is shaded beneath the shapes. Below the line write the total number of equal parts shown on the shape. Above the line write the number of parts that are shaded. Then write a **greater than (>)** or **less than (<)** symbol in the circle between the fractions to show which is greater.



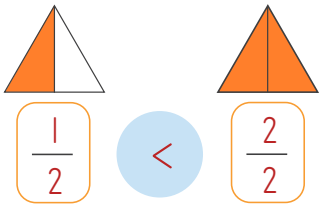
$\frac{2}{4} > \frac{1}{4}$



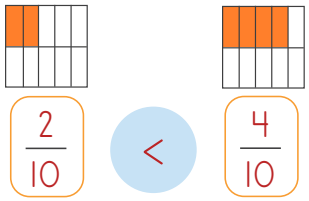
$\frac{2}{6} < \frac{3}{6}$



$\frac{2}{4} > \frac{1}{4}$



$\frac{1}{2} < \frac{2}{2}$



$\frac{2}{10} < \frac{4}{10}$

INDEPENDENT REVIEW

Complete the problems. Then round the sums (answers) to the nearest 10 and write them in the purple boxes.

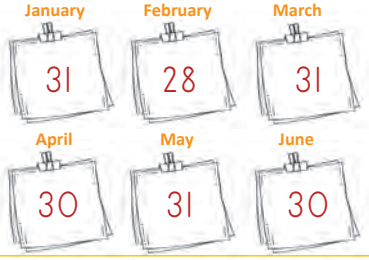
Tens	Ones
1	
3	8
+2	3
6	1

Rounded Sum: 60

Tens	Ones
1	
2	9
+4	4
7	3

Rounded Sum: 70

Write the number of days in each month in a non-leap year. If needed, reference the poem on page 152.



Check Your Addition Problems with Subtraction

8	15		6	13	
+ 7	- 7		+ 7	- 7	
15	8		13	6	

Complete the subtraction problems. Don't forget to borrow and regroup.

4 1 3	7 1 2	8 1 4
- 37	- 45	- 39
16	37	55

Circle the bills you would use to equal the dollar amount. Use the fewest number of bills. (Hint: Circle the highest-value bills you can use first.)

$1,016

INDEPENDENT REVIEW

Your family is studying butterflies for science. They want to know which one you like best. Put the butterflies in order of those you like most to those you like least by writing the ordinal numbers in each circle: 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th

Answers will vary.

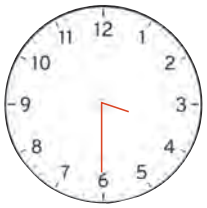
Write your birthday including the month, day, and year.

Answers will vary.

Write one of your parents' phone numbers in this format: 429-555-4588.

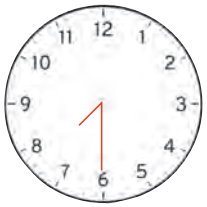
Answers will vary.

Draw hands on each clock to show the time given.



half past 3

6:05



seven-thirty

Lesson 78

MULTIPLICATION: PART 1

Mental Math & Skip Counting

- **Read to the child:** An easy way to add 9 to any number is to first add 10 and then subtract 1. Mentally complete the problems in purple. Say the answers aloud.

18 + 9	35 + 9	29 + 9	36 + 9	17 + 9
27	44	38	45	26

- Have the child count by 5s from 500 to 0.
- Have the child count by 5s from 900 to 1,000.

Read to the child: Look at the painting on the next page. Today we will use this painting to learn about multiplication. We use the × sign when we multiply. ***Multiplication*** is a shortcut for adding equal groups together to find the total. Where would you plant a garden on this farm? The farmer has planted straight rows of cabbages. Let's suppose he planted 6 rows of plants and there are 10 plants in each row. To figure out how many plants there are altogether, we could do this addition problem. Skip count to complete the problem:

10 + 10 + 10 + 10 + 10 + 10 = 60

How many times did you add 10 together? Yes, 6 times. We could use this multiplication problem instead of the addition problem:

6 × 10 = 60

Multiplying 6 times 10 is the same as adding 10 six times.

Point to the stacks of hay in the field. Let's suppose there are 5 rows of hay and there are 3 stacks of hay in each row.

To figure out how many stacks of hay there are total, we could do this addition problem. Skip count to complete the problem:

3 + 3 + 3 + 3 + 3 = 15

How many times did you add 3 together? Yes, 5 times. We could use this multiplication problem instead of the addition problem:

5 × 3 = 15

Multiplying 5 × 3 gives us the same answer as adding 3 five times.

Now I am going to read you some math problems. For each math problem, write an addition problem that can answer the question, and then write a multiplication problem that can answer the question. Complete the problems by using skip counting. The answer key shows the answers in the blank boxes below for your reference if needed.

#1: Point to the barn. In the barn are 2 rows of horse stalls. There are 4 stalls in each row. How many stalls are there altogether?

2 + 2 + 2 + 2 = 8 | 2 × 4 = 8

#2: The farmer planted 5 rows of corn, and there are 7 corn plants in each row. How many corn plants are there altogether?

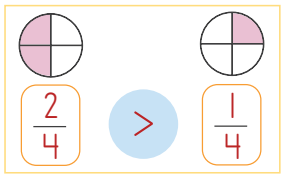
7 + 7 + 7 + 7 + 7 = 35 | 7 × 5 = 35

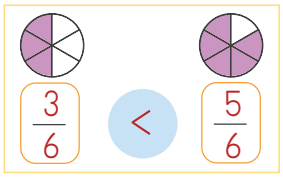
#3: Run your finger along all the fences you see in the painting. The farmer built 3 new sections of fences, and each section used 6 pieces of wood. How many pieces of wood did he use altogether?

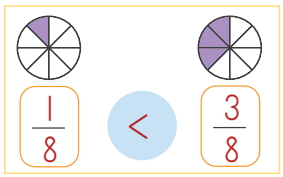
6 + 6 + 6 = 18 | 3 × 6 = 18

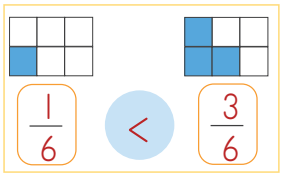
INDEPENDENT REVIEW

Write a fraction to show the shaded part of each shape. Below the line write the total number of equal parts shown on each shape. Above the line write the number of parts that are shaded. Then write a greater than (>) or less than (<) symbol in the circle between the fractions to show which fraction is greater.

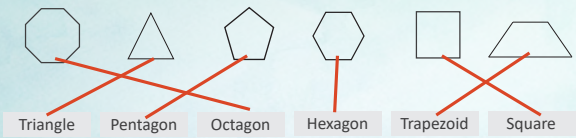








Draw a line from each shape to its name. (Hints: "Octa-" means 8. "Hexa-" means 6. "Penta-" means 5.)



Complete the problems.

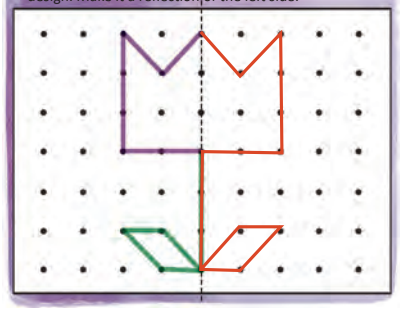
Hundreds	Tens	Ones
	1	
4	1	7
+ 2	6	3
6	8	0

Hundreds	Tens	Ones
1	1	
2	4	9
+ 3	6	7
6	1	6

PEG Patterns

Symmetry

Use colored pencils to complete the right side of the design. Make it a reflection of the left side.



INDEPENDENT REVIEW

Use this calendar to fill in the boxes below.

April 2025

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

1. Write the word for the number circled in green.

fifteen

2. Write the word for the number one week before the date circled in green.

eight

3. Circle the day of the week that May 1st will be.

Sunday Monday Tuesday Wednesday
Thursday Friday Saturday

Mystery Owls

Find the correct number of owls to color or circle based on the clues below. Then color or circle that many owls.

Clues

1. It is an even number.
2. It is greater than 11 and less than 16.
3. It does not have a 4 in the ones place.

Lesson 79

MULTIPLICATION: PART 2

Skip Counting

Have the child skip count by 4s from 4 to 28 once or twice. If needed, have the child use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Mental Math

Have the child add 100 to each number.

300 + 100	2,000 + 100	4,100 + 100
400	2,100	4,200

- Read to the child: Suppose you have 4 shelves of books with 2 books on each shelf. To figure out how many books there are total, we could do this addition problem. Skip count to complete the problem:

  2 + 2 + 2 + 2 = 8

  How many times did you add 2 together? Yes, 4 times. We could use this multiplication problem instead of the addition problem:

  Multiplying 4 × 2 is the same as adding 2 four times.

  4 × 2 = 8

- Take the helicopter from the math box. Have a whiteboard and dry-erase marker ready. Read to the child: There are several different landscapes on this page and the next page.

Take your helicopter and land it on your favorite scene. Then tell me two different ways to say the time on the clock (for example, half past 6 and 6:30 or quarter to 5 and 4:45). Also tell me if it is AM or PM. Then I will read the story. On the whiteboard you write an addition problem that can answer the question in the story, and then write a multiplication problem that can answer the question. Complete the problems by using skip counting. Then go to your next favorite scene and so on until you have visited every scene.

1:15

You see 2 windmills (1 in front of you and 1 behind you) that have 4 blades each. How many blades are there altogether?

4 + 4 = 8 4 × 2 = 8

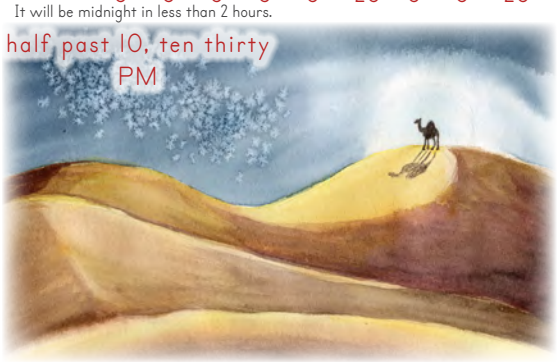
Midnight was just over an hour ago.

10:30

Five camels came carrying 5 baskets each. How many baskets were the camels carrying altogether?

5 + 5 + 5 + 5 + 5 = 25 5 × 5 = 25

It will be midnight in less than 2 hours.

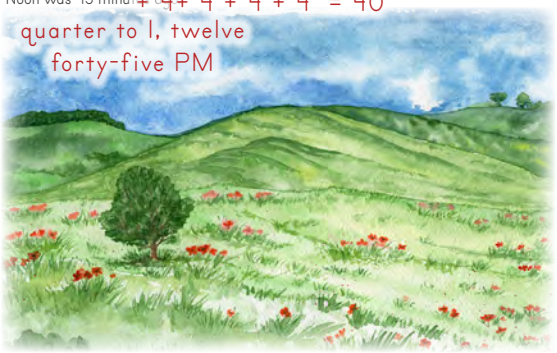


12:45

You find a unique type of red flower. There are 10 flowers with 4 petals each. How many petals are there altogether?

4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 = 40 10 × 4 = 40

Noon was 45 minutes ago.



3:15

Four trees have 3 nests each. How many nests are there altogether?

It is daytime.

3 + 3 + 3 + 3 = 12 4 × 3 = 12

11:45

As you watch the stars, you pull 3 chocolate bars from your backpack. Each bar has 5 sections. How many sections of chocolate do you have altogether?

It is almost midnight.

5 + 5 + 5 = 15 3 × 5 = 15

INDEPENDENT REVIEW

Complete the problems. Before adding each column, if there are doubles, connect them with a curved line as shown on the first problem. (You don't have to do this at other times; this is just for practicing one possible strategy.)

2	1	1	1
98	46	95	67
94	46	35	34
+ 38	+ 25	+ 94	+ 67
230	117	224	168

Complete the subtraction problems. Don't forget to borrow and regroup.

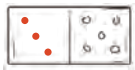
6 12	5 10	6 14
- 37	- 36	- 47
35	24	27

Read the name of each polygon. Below each polygon write how many sides it has.

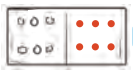
Octagon	Triangle	Pentagon	Hexagon	Square	Trapezoid
8	3	5	6	4	4

Fill in the missing addend. If needed, draw the missing number of dots on the domino to help you find the answer.

4 + 3 = 7



3 + 5 = 8



6 + 6 = 12

Lesson 80

WEIGHT: PART 1

Mental Math

Read to the child: An easy way to add 20 to any number is to increase the digit in the tens place by 2. Mentally complete the problems and say the answers aloud.

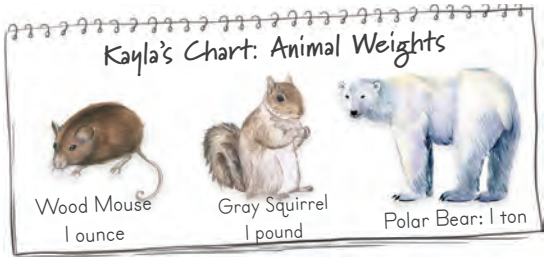
41 + 20	16 + 20	73 + 20
61	36	93

○ **Read to the child:** This is Kayla. Her family just bought a scale to measure weight. ***Weight*** is how heavy something is. She steps on it and sees that she weighs 70 pounds. In the US customary system of measurement used in the United States and a few other countries, weight is measured in ounces, pounds, and tons. Look at the purple chart, and then answer the questions I ask.

Ounce	Pound	Ton
A wooden pencil weighs about an ounce.	16 ounces	2,000 pounds
	A can of soup or box of cereal weighs about a pound.	A small car or a giraffe is about a ton.

What is heavier: a pound or an ounce? pound Heavier: a ton or a pound? ton How many ounces are in a pound? 16 ounces If 1 ounce, how many pencils would weigh a pound? If 16 pencils weighs one pound, how many cans of soup would weigh one ton? 2,000 cans Would a loaf of bread be more likely to weigh a pound or a ton? a pound Would a loaf of bread that weighs a ton could fit on your kitchen counter? no

○ **Read to the child:** Kayla weighs a lot of things in her house with her family's new scale and thinks it is so fun. She loves animals, so she decides to make a chart for her homeschool science journal. Tell me each animal on her chart and about how much it weighs.



○ **Read to the child:** Complete the following exercises. Refer to the charts on this page if needed.

Fill in the circle that shows the most reasonable weight of each bird.

Mallard Duck
- ○ 1 ton
- ● 2 pounds
- ○ 2 ounces

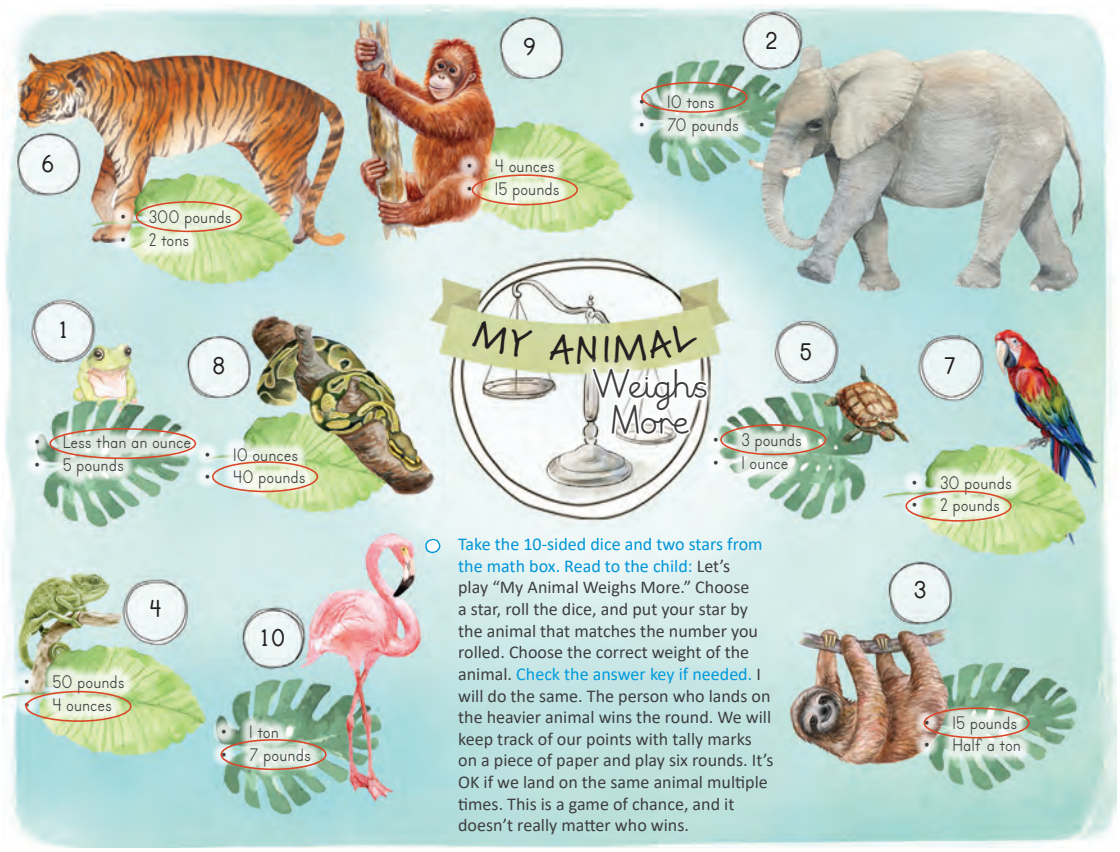
Ostrich
- ● 200 pounds
- ○ 2 tons
- ○ 14 ounces

Robin
- ○ 200 pounds
- ○ 2 tons
- ● 3 ounces

If a truck weighed 3 tons and we wanted to figure out how many pounds it was, we could add 2,000 + 2,000 + 2,000 (because there are 2,000 pounds in each ton), or we could write 2,000 × 3. Write an addition problem and a multiplication problem to figure this out: if a dog weighed 3 pounds, how many ounces would it weigh? You do not need to complete the problems; just write them.

16 + 16 + 16 = 48

16 × 3 = 48



Take the 10-sided dice and two stars from the math box. Read to the child: Let's play "My Animal Weighs More." Choose a star, roll the dice, and put your star by the animal that matches the number you rolled. Choose the correct weight of the animal. Check the answer key if needed. I will do the same. The person who lands on the heavier animal wins the round. We will keep track of our points with tally marks on a piece of paper and play six rounds. It's OK if we land on the same animal multiple times. This is a game of chance, and it doesn't really matter who wins.

INDEPENDENT REVIEW

Write the answer to each addition problem with number words.

eleven twelve thirteen fourteen

7 + 5 = twelve

5 + 6 = eleven

8 + 5 = thirteen

9 + 5 = fourteen

Find and circle the number word for each number.

Number Words Word Search

7, 11, 12, 13, 14, 15

f	o	u	t	e	e	m	t
i	f	r	w	t	h	i	h
f	i	s	e	v	e	n	i
t	f	x	l	c	w	c	r
e	l	e	v	e	n	r	t
e	e	s	e	q	r	t	e
n	e	v	e	l	m	d	e
f	o	u	r	t	e	e	n

Complete the problems. Then round the sums (answers) to the nearest 10 and write them in the purple boxes.

Hundreds	Tens	Ones
	1	
	3	7
+	4	8
	8	5

Rounded Sum: 90

Hundreds	Tens	Ones
	1	
	4	9
+	2	9
	7	8

Rounded Sum: 80

Lesson 81

MULTIPLICATION: PART 3

Skip Counting

Have the child skip count by 4s from 4 to 28 once or twice. If needed, have the child use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Mental Math

Have the child SUBTRACT 100 from each number aloud.

432 - 100	3,102 - 100	1,000 - 100
332	3,002	900

○ Read to the child: An ***array*** is a a group of numbers or items arranged into rows and columns. Look at this array with grasshoppers. How many grasshoppers are in each row? How many rows are there? Read to the child the addition and multiplication problems shown by the array.

Addition Problem: 5 + 5 + 5

Multiplication Problem: 3 × 5 (3 rows × 5 grasshoppers in a row)

○ Read to the child: Write the addition problem and multiplication problem shown by each array.

Addition Problem: 6 + 6 = 12

Multiplication Problem: 2 × 6 = 12

Addition Problem: 4 + 4 + 4 + 4 = 16

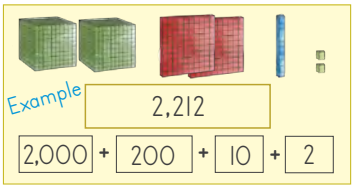
Multiplication Problem: 4 × 4 = 16

Addition Problem: 10 + 10 + 10 = 30

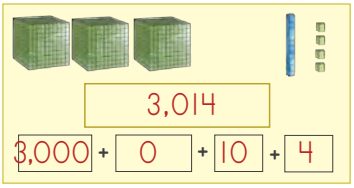
Multiplication Problem: 3 × 10 = 30

INDEPENDENT REVIEW

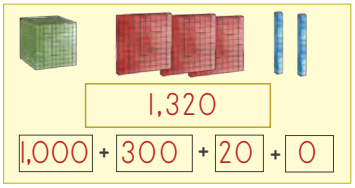
Write the standard form and expanded form for each set of base-10 items.



Example: 2,212 = 2,000 + 200 + 10 + 2



3,014 = 3,000 + 0 + 10 + 4



1,320 = 1,000 + 300 + 20 + 0

Write the number of days in each month in a leap year. If needed, reference the poem on page 152.

Fill in the circle that shows the most reasonable weight of each item.

1 pound = 16 ounces | 1 ton = 2,000 pounds

Truck
- ● 3 tons
- ○ 3 pounds
- ○ 20 ounces

Carrot
- ○ 1½ tons
- ○ 10 pounds
- ● 2 ounces

Bike
- ○ 1 ton
- ● 17 pounds
- ○ 6 ounces

Dump truck
- ○ 5 pounds
- ● 14 tons
- ○ 20 ounces

Complete each problem.

50 + 50 + 13 = 113	25 + 25 + 50 = 100	10 + 10 + 75 = 95	50 + 25 + 50 = 125

Lesson 82

WEIGHT: PART 2

Money

Using the bills from the math box, give the child several bills in a mixed-up pile (such as 2 $100 bills, 6 $20 bills, 4 $10 bills, 6 $5 bills, and 3 $1 bills) and have the child sort the money into like bills and count the bills. (Start with the highest value bills.) Repeat several times with different piles of bills.

Read to the child: The picture on the next page was painted by Walt Curlee. It shows a boy who has completed his farm chores and now gets to go fishing. We will call him Joe. Joe has done many things on the farm today. We will use the grid over the picture and the coordinates (the numbers and letters) to find where he has been. For example, find the animal at B9 by finding the letter B at the top of the grid and going down the column until you reach row number 9.

Compare the weights in the boxes below and write <, >, or = in each circle. Compare the symbols you wrote in the blue circles to the key in the blue shaded boxes to find the coordinates that answer each question.

1 pound = 16 ounces | 1 ton = 2,000 pounds

Where did Joe have a picnic lunch? A6

"=" A
"<" 6
">" 2

1 ton = 2,000 pounds

16 ounces < 2 pounds

Where did Joe ride his horse? B3

"=" 3
"<" B
">" 1

2 pounds < 1 ton

1 pound = 16 ounces

Where did Joe see an owl last night? E3

"=" E
"<" 3
">" F

8 ounces = half a pound

1 ton < 3,000 pounds

Where did Joe work in the fields? D4

"=" D
"<" C
">" 4

4,000 pounds = 2 tons

2 pounds > 17 ounces

Read to the child: Fill in each blank with any number that makes the statement true.

16 ounces < _____ pound(s)

Answers will vary.

3,000 pounds > _____ ton(s)

2,000 pounds = 1 ton(s)

Answers will vary.

1 pound = 16 ounce(s)

"Fish for Supper" by Walt Curlee, 2007

INDEPENDENT REVIEW

Write the addition problem and multiplication problem shown by each array.

Addition Problem: 6 + 6 + 6 = 18

Multiplication Problem: 3 × 6 = 18

× × × × × ×
× × × × × ×
× × × × × ×

Addition Problem: 3 + 3 = 6

Multiplication Problem: 2 × 3 = 6

× × ×
× × ×

With Xs, show an array that represents the addition and multiplication problems.

Addition Problem: 2 + 2 + 2 + 2

Multiplication Problem: 4 × 2

XX
XX
XX
XX

Star LOGIC

Take the stars from the math box and follow the clues to place the stars on the boxes in the right places.

PUZZLE 20

Use 1 brown star, 1 purple star, 1 red star, 1 yellow star, and 1 light-green star.

Clue 1: The brown star is below the yellow star and red star.

Clue 2: The purple star is on the left side of the brown star.

Clue 3: The light-green star is on the left side of the red star.

PUZZLE 21

Use 1 dark-green star, 1 purple star, 1 light-blue star, 1 brown star, and 1 light-green star.

Clue 1: The light-green star is on the right side of the purple star.

Clue 2: The brown star is on the left side of the dark-green star.

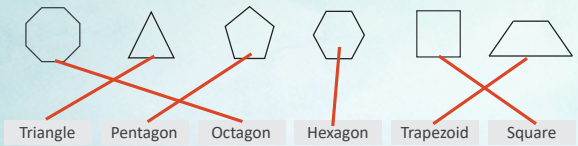
Clue 3: The dark-green star is on the left side of the light-blue star.

INDEPENDENT REVIEW

Complete the subtraction problems.

4 13 − 37 = 16	7 12 − 45 = 37	8 14 − 39 = 55

Draw a line from each shape to its name. (Hints: "Octa-" means 8. "Hexa-" means 6. "Penta-" means 5.)



Complete the Riddle

Complete each addition problem. Then use the key to answer the riddle.

What is full of holes but still holds water?

22 12 +15 = 49	1 27 37 +22 = 86	1 37 17 +21 = 75
s	p o	n g e

7 = g, 6 = n, 4 = s, 2 = y, 9 = p, 5 = e, 8 = o, 3 = m, 1 = a

Complete each problem.

75 + 25 + 25 = 125	40 + 10 + 25 = 75	50 + 50 + 27 = 127	25 + 25 + 20 = 70

Lesson 83

TWO-STEP STORY PROBLEMS: PART 1

Spelling Numbers

Have the child write "twelve," "sixteen," "seventeen," and "eighteen" on the whiteboard.

○ Give the child a whiteboard and dry-erase marker. Read to the child: At the bottom tip of Florida in the United States is Everglades National Park—a huge wetland preserve with swamps, marshes, and some fascinating creatures. In the Everglades, it is easiest to travel by a vehicle called an airboat. We will use two-step story problems as we follow Gabe and his father, who is a park ranger, on their day out on the airboat. I will walk you through the first two story problems. First, listen to the whole problem. Then we will work through it. Read the purple text and then the black text.

In the early morning, Gabe and his father went around a bend in the river and spotted the first alligators of the day. Look at the picture and count how many alligators they saw. A little later in the morning, they saw 7 more alligators.* Out of all the alligators they saw, 3 were babies. How many alligators did they see that were NOT babies?

The first thing we need to do is figure out how many alligators they saw total. I'll read part of the story again, and you write an addition problem to figure out the total number of alligators seen. Read the purple text again and stop at the asterisk. The child should write 11 + 7 = 18. Now I'll read the rest of the problem, and you write a subtraction problem to answer the question. Read the rest of the text. The child should write 18 − 3 = 15.

Gabe and his dad found something amazing—a nest of alligator eggs were hatching. There were 35 total eggs, and 4 of them had already hatched. Before they had to leave, 6 more hatched.* How many eggs had NOT hatched by the time they left?

There are two ways we could figure out this problem. Here is one of them. First, create an addition problem to figure out how many eggs had hatched by the time they left. Read the purple text again and stop at the asterisk. The child should write 6 + 4 = 10. Now you can subtract 10 from the total number of eggs. The child should write 35 − 10 = 25. We figured out that 25 eggs had not hatched by the time Gabe and his father had to leave.

○ Read to the child: I'll read three more stories. Listen to the entire story first. Then I'll read it again and pause while you write down the first problem. Then I'll continue reading, and you write down the next problem. Check the answer key if needed.

Gabe found turtle eggs on a bank. Of the 43 eggs, 17 had hatched. As he ate his lunch, 5 more hatched. How many eggs have still not hatched?

17 + 5 = 22 43 − 22 = 21

With his brand-new camera, Gabe took 10 photos. Then he took 10 more photos. He deleted 5 of the photos he took. How many photos does he have on his camera?

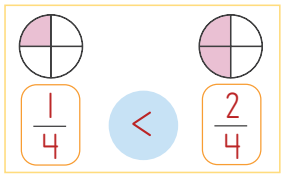
10 + 10 = 20 20 − 5 = 15

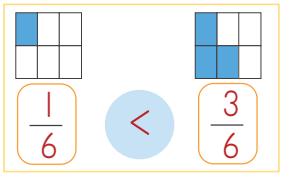
At another spot, Gabe saw 27 alligators on the bank. 14 of them went into the water. Then 8 more of them went into the water. How many are left on the bank?

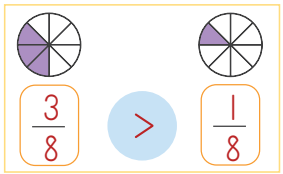
14 + 8 = 22 27 − 22 = 5

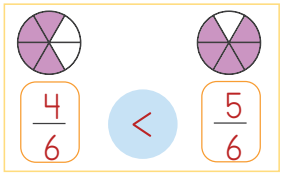
INDEPENDENT REVIEW

Write a fraction to show the shaded part of each shape. Below the line write the total number of equal parts shown on each shape. Above the line write the number of parts that are shaded. Then write a greater than (>) or less than (<) symbol in the circle between the fractions to show which fraction is greater.









Check Your Addition Problems with Subtraction

9 + 4 = 13 13 − 4 = 9

7 + 3 = 10 10 − 3 = 7

Write the addition problem and multiplication problem shown by each array.

Addition Problem: 5 + 5 = 10

Multiplication Problem: 2 × 5 = 10

○○○○○
○○○○○

Addition Problem: 2 + 2 = 4

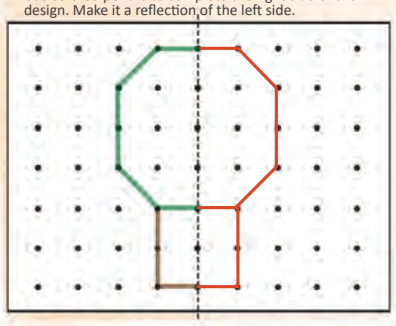
Multiplication Problem: 2 × 2 = 4

× ×
× ×

PEG Patterns

Symmetry Symmetry?

Use colored pencils to complete the right side of the design. Make it a reflection of the left side.



Lesson 84

WEIGHT: PART 3

Spelling 16, 17, 18, 19

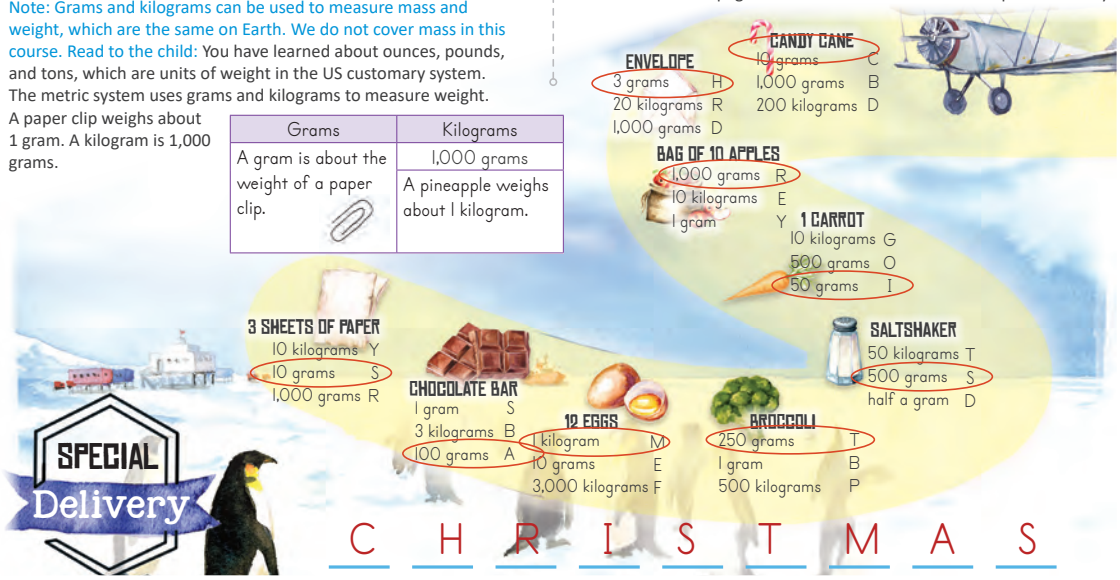
Have the child write the number words for 16, 17, 18, and 19 on the whiteboard.

○ Note: Grams and kilograms can be used to measure mass and weight, which are the same on Earth. We do not cover mass in this course. Read to the child: You have learned about ounces, pounds, and tons, which are units of weight in the US customary system. The metric system uses grams and kilograms to measure weight. A paper clip weighs about 1 gram. A kilogram is 1,000 grams.

Grams	Kilograms
A gram is about the weight of a paper clip.	1,000 grams
	A pineapple weighs about 1 kilogram.

What is heavier: a gram or a kilogram? How many grams are in a kilogram? [1,000] If a paper clip weighs one gram, how many paper clips would weigh a kilogram? [1,000] Would a pinch of salt be more likely to weigh a gram or a kilogram? [gram] A kilogram of salt would be about two pounds of salt. Would you want to put that much salt in your cookies?

○ **Special Delivery Activity.** Take an airplane from the math box. Read to the child: This plane is on a special mission to deliver items to a research station in Antarctica. Starting at the plane below, follow the route to the research station. Stop at each delivered item and circle the most reasonable weight of each object. Write the letter found next to each circled weight in order on the blue lines at the bottom of the page to uncover the occasion for the special delivery.

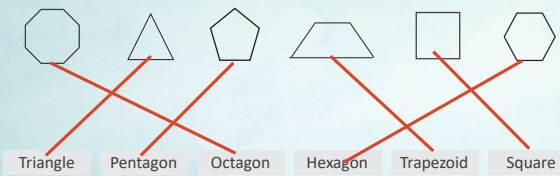


INDEPENDENT REVIEW

Complete the subtraction problems.

5 ~~6~~2 − 39 = 23	7 ~~8~~3 − 55 = 28	8 ~~9~~3 − 39 = 54

Draw a line from each shape to its name. (Hints: "Octa-" means 8. "Hexa-" means 6. "Penta-" means 5.)



Complete the Riddle

Complete each addition problem. Then use the key to answer the riddle.

I'm an invention that allows you to see through brick walls.

51 + 33 + 13 = 97	23 + 24 + 16 = 63	37 + 27 + 25 = 89
w	i n d	o w

7 = i, 6 = n, 4 = s, 2 = y, 9 = w, 5 = e, 8 = o, 3 = d, 1 = a

Complete each problem by decreasing the digit in the tens place by 1.

123 − 10 = 113	1,456 − 10 = 1,446	345 − 10 = 335	3,698 − 10 = 3,688

Lesson 85

FRACTIONS: PART 5

Extra Item
scissors

Skip Counting

Have the child skip count by 4s from 4 to 28 once or twice. If needed, have the child use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

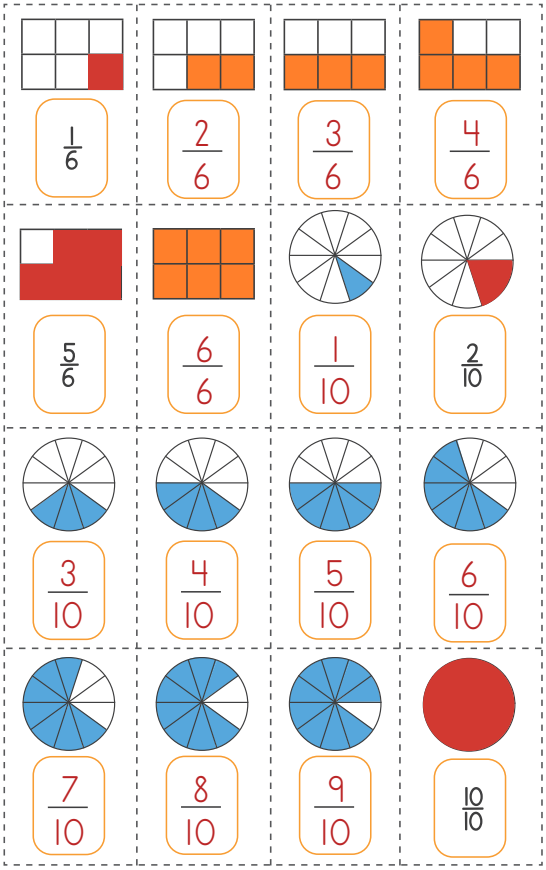
Mental Math

Have the child answer the problems aloud.

600 - 100	2,200 + 100	4,300 - 100	6,600 + 1,000
500	2,300	4,200	7,600

○ Read to the child: Today you get to do activities with fractions! The bottom number of a fraction tells how many equal parts a whole is divided into. The top number tells how many parts we are referring to.

1. First, for each box on the next column, either shade in the right number of parts on the shape (if the shape is empty) to show the fraction below the shape, or write the fraction shown by the shape.
2. Cut out the boxes and mix them together. Collect and lay the rectangle fractions in a row from the smallest to the largest fraction. Do the same with the circles.
3. Collect the rectangle fraction boxes and turn them all over. You and I choose a box each round. The person with the largest fraction wins. We'll keep track of points with tally marks on the whiteboard and return the pieces after each turn. The first person to get to 4 tally marks wins. We will then repeat the same game with the circle fractions.



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INDEPENDENT REVIEW

Write the addition problem and multiplication problem shown by each array.

Addition Problem:	5 + 5 = 10
Multiplication Problem:	2 × 5 = 10
○○○○○ ○○○○○	

Addition Problem:	2 + 2 = 4
Multiplication Problem:	2 × 2 = 4
× × × ×	

Complete the addition problems.

4 + 5 + 6 = 15

5 + 12 + 10 = 27

67	64	78
45	37	74
+ 63	+ 66	+ 68
175	167	220

INDEPENDENT REVIEW

Fill in the circle that shows the most reasonable weight of each item.

1 ounce is about the weight of a pencil.
1 pound = 16 ounces | 1 ton = 2,000 pounds

Average Pumpkin
- ○ 3 tons
- ● 8 pounds
- ○ 3 ounces

Helicopter
- ○ 15 ounces
- ○ 40 pounds
- ● 4 tons

Butterfly
- ○ 1 ton
- ○ 1 pound
- ● less than one ounce

Goat
- ● 120 pounds
- ○ 150 tons
- ○ 20 ounces

Fill in the circle that shows the most reasonable weight of each item.

1 gram is about the weight of a paper clip.
1 kilogram = 1,000 grams (about the weight of a pineapple)

Honeybee
- ○ 3 kilograms
- ● 3 grams
- ○ 1 kilogram

3 Books
- ● 25 kilograms
- ○ 1 kilogram
- ○ 20 grams

Cow
- ● 650 kilograms
- ○ 17 kilograms
- ○ 6 grams

Pushpin
- ● $1\frac{1}{2}$ grams
- ○ $1\frac{1}{2}$ kilograms
- ○ 40 grams

Write the correct time in the blue box if you start at 12 PM.

12 PM

A HALF HOUR FROM NOW	12:30 PM
2 HOURS FROM NOW	2:00 PM
1 HOUR FROM NOW	1:00 PM
4 HOURS FROM NOW	4:00 PM

Check Your Addition Problems with Subtraction

$7 + 4 = 11$ so $11 - 4 = 7$

$6 + 3 = 9$ so $9 - 3 = 6$

Lesson 86

MULTIPLICATION STORY PROBLEMS

Time

Have the child set the following times on the clock from the math box:

quarter to 3 | 4:28 | quarter after 7 | quarter to 7 | 5:53

Mental Math & Skip Counting

- **Read to the child:** An easy way to add 9 to any number is to first add 10 and then subtract 1. Mentally complete the problems in purple. Say the answers aloud.

18 + 9	35 + 9	29 + 9	36 + 9	17 + 9
27	44	38	45	26

- Have the child count backward by 50s from 1,000 to 700.
- Have the child count by 5s from 900 to 1,000.

○ Give the child a whiteboard and dry-erase marker. Read to the child: Today, you are going to imagine that you are organizing some summer arts and crafts classes for younger children in your neighborhood. You need to figure out how many supplies you need. For each item write an addition problem and multiplication problem in the box provided that can help you figure out how many total items are needed. You do not need to complete the problems. Read the story in each box. For your reference, the answers can be found in the blank boxes on the answer key.

Eight children need scissors in the grade 1 group, and 8 children need scissors in the grade K group. How many pairs of scissors do you need altogether?

$2 \times 8 = 16$

Four children need 3 colored pencils each. How many colored pencils do you need altogether?

$4 \times 3 = 12$

There are 3 groups of children. Each group needs 2 rulers to share. How many rulers do you need altogether?

$2 \times 3 = 6$

Five children need 3 pieces of paper each. How many pieces of paper do you need altogether?

$3 \times 5 = 15$

Six children need 4 paintbrushes each. How many paintbrushes do you need altogether?

$4 \times 6 = 24$

Four children need 2 feathers each. How many feathers do you need altogether?

$2 \times 4 = 8$

INDEPENDENT REVIEW

Write the number words.

11 eleven

12 twelve

13 thirteen

14 fourteen

In each circle write a greater than, less than, or equal sign.

8 + 7 > 9 + 4

IIII IIII IIII IIII = IIII IIII IIII IIII

Write the number of days each month has.

August 31 | September 30 | October 31

Fill in the circle that shows the most reasonable length or distance of each item. It takes about 20 minutes to walk a mile. A meter is about as long as a wagon.

Miles/Kilometers

Yards/Meters

A Football Field
- ● 100 yards
- ○ 10 yards
- ○ 10 miles

The Distance to the Post Office
- ● 3 miles
- ○ 1 yard
- ○ 300 miles

A Driveway
- ● 15 meters
- ○ 15 kilometers
- ○ 1 meter

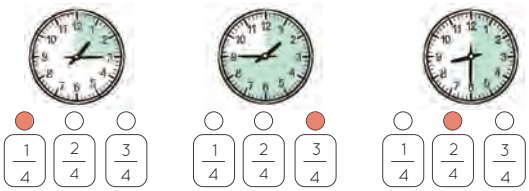
The Length of a Car
- ● 15 feet
- ○ 15 miles
- ○ 100 yards

For each amount of cents shown, circle the coins you would use to equal the amount. Use the fewest number of coins. (Hint: Circle the highest-value coins you can use first.)

78¢

67¢

An hour can be divided into four quarters. Fill in the circle that shows what fraction of an hour is shown on each clock.



Lesson 87

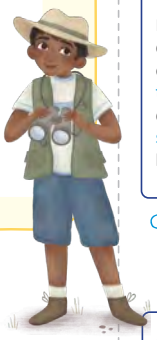
TWO-STEP STORY PROBLEMS: PART 2

Number Work

- Have the child write 16, 17, and 18 on the whiteboard in number words.
- Say the following numbers aloud and have the child create those numbers with stars from the math box:

5,326 | 2,014 | 4,970 | 3,025 | 9,502

- Have the child count backward from 1,000 to 980.



○ Give the child a whiteboard and dry-erase marker. Read to the child: Over 360 types of birds live in the Florida Everglades. We will complete two-step story problems as we follow Gabe and his father, who is a park ranger, on another day out on the airboat. I will guide you through the first two stories. First, listen to the whole story. Then we will work through the math. Read the purple text and then the black text.

Gabe counted all the blue herons he saw that day. Before lunch he saw 4, and after lunch he saw 12.* Gabe knows that male herons are larger than female herons. He looked closely. 8 of the herons he saw were females. How many were males? 4 + 12 = 16 16 − 8 = 8

The first thing we need to do is figure out how many herons he saw in total. I will read part of the story again, and you will write a problem to figure out the total number of herons seen. Read the purple text again and stop at the asterisk. The child should write 4 + 12 = 16. Now I will read the rest of the problem, and you will write a problem to answer the question. Read the rest of the text. The child should write 16 - 8 = 8.

With his binoculars Gabe spotted a nest of duck eggs. He saw 12 eggs. As he was watching, he witnessed 3 eggs hatch! Just before Gabe had to leave, he checked the nest one last time and saw that 4 more eggs had hatched. How many eggs had NOT hatched by the time Gabe had to leave? 3 + 4 = 7 12 − 7 = 5

Here is one way we can figure out the problem. First, create an addition problem to figure out how many eggs had hatched by the time they left. Read the purple text again. The child should write 3 + 4 = 7. Now you can subtract 7 from the total number of eggs. The child should write 12 - 7 = 5. We figured out that 5 eggs had not hatched by the time Gabe and his father had to leave.

○ Read to the child: I'll read four more stories. Listen to the entire story first. Then I'll read it again as many times as you need as you write down and complete the problems that answer each story.

Gabe counted 7 birds in a tree. Then 3 more birds flew onto the tree. 2 of the birds were storks. How many birds on the tree were not storks? 7 + 3 = 10 10 − 2 = 8

Gabe saw 23 ducks before lunch and 17 ducks after lunch. Thirteen of the ducks he saw were wood ducks. How many ducks did he see that were not wood ducks? 23 + 17 = 40 40 − 13 = 27

That day Gabe took 12 photos. Then he took 7 more photos. He deleted 3 of the photos he took. How many photos did he take that day that he did not delete? 12 + 7 = 19 19 − 3 = 16

Gabe had 22 bird sketches in his sketchbook. Today, he added 3 more sketches before lunch and 2 more sketches after lunch. How many sketches does he have in total? 22 + 3 = 25 25 + 2 = 27

Star LOGIC

Take the stars from the math box and follow the clues to place the stars on the boxes in the correct places.

PUZZLE 22

Use 1 red star, 1 brown star, 1 light-green star, 1 yellow star, and 1 orange star.

Clue 1: The orange star is on the left side of the brown star.

Clue 2: The red star is above the brown and light-green stars.

Clue 3: The yellow star is on the left side of the red star.

PUZZLE 23

Use 1 brown star, 1 light-blue star, 1 dark-blue star, 1 purple star, and 1 pink star.

Clue 1: The dark-blue star is on the right side of the purple star.

Clue 2: The light-blue star is between the pink star and brown star.

Clue 3: The brown star is below the dark-blue star.

INDEPENDENT REVIEW

Write how many are in a dozen and a half dozen.

Dozen 12 Half Dozen 6

Write and complete the problem for the story.

The shelter has 50 cats, 50 dogs, and 13 rabbits. How many total animals does the shelter have? (Hint: To complete the problem, skip count by 50s, and then add 13.)

50 + 50 + 13 = 113

Monday through Friday are weekdays. Saturday and Sunday are weekend days. In the table below, color the weekday boxes blue and the weekend boxes yellow.

SUN	MON	TUES	WED	THUR	FRI	SAT

Write the fact family using the numbers at the top.

For each dollar amount shown, circle the bills you would use to equal the dollar amount. (Hint: Circle the highest value bills you can use first.)

$176 $10 $20 $1 $50 $100 $5

$125 $10 $20 $5 $50 $100 $20

$165 $10 $20 $1 $50 $100 $5

Lesson 88

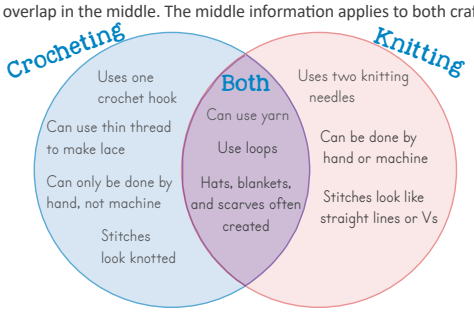
DATA: CREATING A VENN DIAGRAM

Mental Math

Have the child look at each problem below, identify whether there is a doubles addition fact that can help complete the problem, and then say the answer aloud.

14	13	10	18	8	12
- 7	- 3	- 5	- 9	- 4	- 6
7	10	5	9	4	6

Read to the child: Chloe and her cousins love crafts. They try to find the similarities and differences between two crafts: crocheting and knitting. To see this information visually, they use a Venn diagram. A Venn diagram is a way to show similarities and differences. Point to the blue part of the circle on the left. It shows information that applies to crocheting and not knitting. The red part of the circle on the right shows data that applies to knitting but not crocheting. The circles overlap in the middle. The middle information applies to both crafts.



Read to the child: The cousins are trying to compare the crafts they love doing. Use the Venn diagram to answer the questions below aloud. Remember that the areas that are formed by overlapping circles show similarities.

Read to the child: Create a Venn diagram that shows similarities and differences between cats and dogs. Then in the diagram, I will draw and write what you tell me aloud. Answers will vary.

INDEPENDENT REVIEW

Write an addition problem and multiplication problem that can help you figure out how many total items are needed.

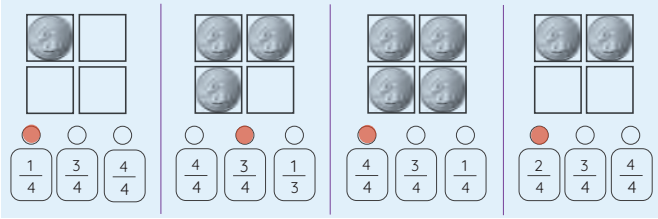
3 children need 5 paintbrushes each. How many total paintbrushes are needed?

Addition Problem	Multiplication Problem
5 + 5 + 5 = 15	3 × 5 = 15

Complete the subtraction problems. Don't forget the dollar sign and decimal point in your answer.

$5.65	$7.38	$8.42
- $2.15	- $3.52	- $4.25
$3.50	$3.86	$4.17

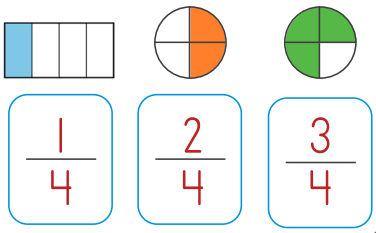
Under each quarter or group of quarters, fill in the circle that shows what fraction of a dollar it is.



Complete the problems. Then round the answers to the nearest 10 and write the rounded sums in the purple boxes.

26	47
+ 48	+ 24
74	71
Rounded Sum	Rounded Sum
70	70

Write the fraction of each shape that is shaded. The bottom number of a fraction tells how many equal parts a whole is divided into. The top number tells how many parts we are referring to.



1/4	2/4	3/4

LESSONS 89-90

UNIT ASSESSMENT

Parent/Teacher

Read the following information aloud to the child: Unit assessments give you practice with the math concepts learned in this unit, without having you over practice concepts that you have mastered. This formal assessment covers only concepts that are expected to be mastered at this point. This allows you to assess the most important concepts that should be understood at this point before moving on and working on the concepts that still need work. Here are some tips. First, make sure to always read the instructions carefully. Sometimes you can get answers wrong simply because you did not understand the instructions. Second, do not rush through exercises you think you already know. Instead, make sure to do your work carefully. Sometimes you can get answers wrong, even though you understand the concept, just because you rushed.

For Lesson 89 have the child complete all the exercises with purple headings only. At this level you may need to read all or some of the instructions to the child. Correct the work. If the child makes one or more mistakes in a section, explain the concept and check the orange "Additional Practice" checkbox for that section.

For Lesson 90 have the child complete all the orange sections **that are checked**. If the child still makes multiple mistakes, make sure the child understands why. All the principles will be reviewed again in upcoming units. If the child has only a few or no orange sections to practice, the child may spend time doing math games or move on to the next lesson.

Note: The concepts in Unit 3 will be reviewed throughout the rest of the course.

Student

ASSESSMENT WITH PARENT/TEACHER

Mark the triangle for any items the child completes incorrectly.

Have the child raise his or her right hand and then left hand.

Have the child complete the addition problems with the number 9. Answers should be given quickly.

29 + 9 = 38 36 + 9 = 45 17 + 9 = 26

Have the child write the numbers 3,270 and 4,504 on the whiteboard.

Have the child tell you how many are in a dozen and in a half dozen.

12, 6

Have the child count backward from 1,000 to 980.

Have the child spell these numbers aloud or write them on the whiteboard: 15, 16, 17, 18, 19.

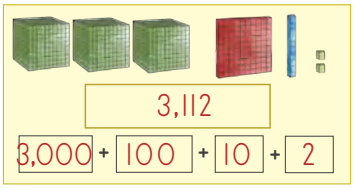
Have the child count by even numbers from 3,000 to 3,012.

Additional Practice

Complete the sections above for which the triangle is marked.

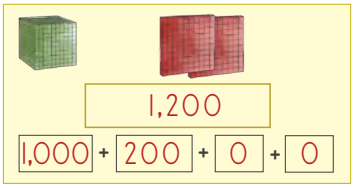
EXPANDED FORM TO THE THOUSANDS

Write the standard form and expanded form for each set of base-10 items.



3,112

3,000 + 100 + 10 + 2

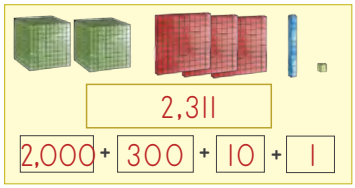


1,200

1,000 + 200 + 0 + 0

Additional Practice

Write the standard form and expanded form for each set of base-10 items.

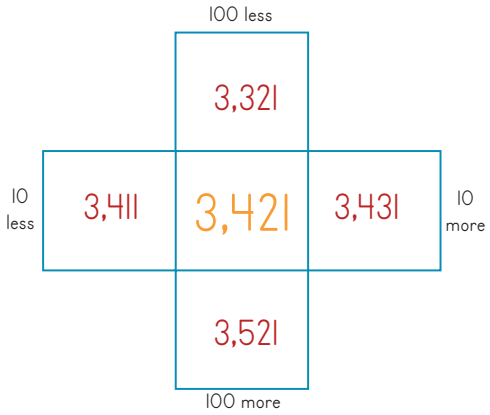


2,311

2,000 + 300 + 10 + 1

ADD AND SUBTRACT 10 AND 100

Fill in the missing boxes.



Additional Practice

Add 10 to the number.	Subtract 10 from the number.	Add 100 to the number.
4,563 → 4,573	3,689 → 3,679	321 → 421

Subtraction with Regrouping

Complete the subtraction problems.

$\overset{4}{\cancel{5}}\overset{1}{}3 - 39 = 14$	$\overset{5}{\cancel{6}}\overset{1}{}5 - 58 = 7$

Additional Practice

Complete the subtraction problems.

$\overset{5}{\cancel{6}}\overset{1}{}4 - 38 = 26$	$\overset{7}{\cancel{8}}\overset{1}{}6 - 59 = 27$

Missing Numbers in Addition Problems

Fill in the missing addend. If needed, draw the missing number of dots on the domino to help you find the answer.

1 + 5 = 6

5 + 4 = 9

4 + 4 = 8

Additional Practice

Fill in the missing addend. If needed, draw the missing number of dots on the domino to help you find the answer.

2 + 6 = 8

5 + 6 = 11

2 + 5 = 7

Two-Step Story Problems

Write and complete the problems for the story.

Tina picked 15 berries, and then she picked 20 more. She ate 10 of the berries. How many berries does she have left?

15 + 20 = 35 35 − 10 = 25

Additional Practice

Write and complete the problems for the story.

There were a dozen eggs in the box. Dan took 9 of the eggs, and Ricardo put 5 new eggs into the box. How many eggs are in the box now?

12 − 9 = 3 3 + 5 = 8

Rounding with Subtraction & Addition

Complete the addition or subtraction problem and write the answer rounded to the nearest ten.

Problem	Rounded answer
35 - 10	30
16 - 5	10
24 - 13	10
8 + 5	10
15 + 10	30
4 + 0	0

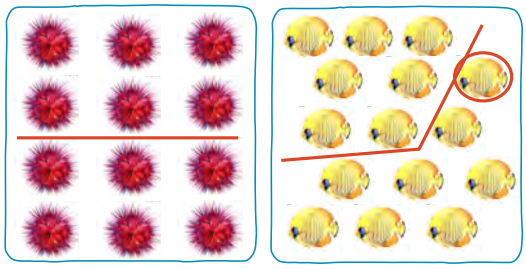
Additional Practice

Complete the addition or subtraction problem and write the answer rounded to the nearest ten.

Problem	Rounded answer
52 - 14	40
40 - 9	30
36 - 19	20
12 + 9	20
25 + 8	30
3 + 1	0

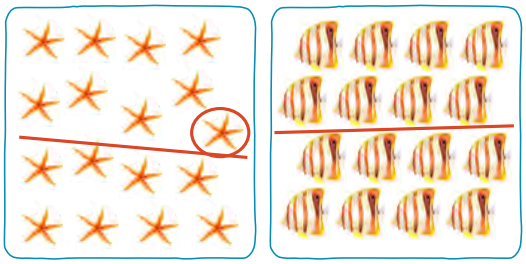
DIVIDING INTO GROUPS EVENLY AND WITH 1 LEFT OVER

Draw a line to divide each group of items into two even sets. If there is one left over, circle it.



Additional Practice

Draw a line to divide each group of items into two even sets. If there is one left over, circle it.



ADDING 3 TWO-DIGIT NUMBERS

Complete the addition problems.

63	65
37	47
+ 66	+ 25
166	137

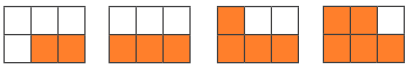
Additional Practice

Complete the addition problems.

28	49
32	31
+ 68	+ 29
128	109

FRACTIONS

Write the fraction of each shape that is shaded. The total number of parts goes on the bottom, and the number shaded goes on top.



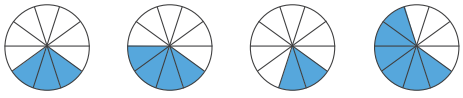
$\frac{2}{6}$ $\frac{3}{6}$ $\frac{4}{6}$ $\frac{5}{6}$

Draw a greater than or less than sign between the two fractions.

$\frac{3}{6} > \frac{1}{6}$ $\frac{4}{8} < \frac{6}{8}$

Additional Practice

Write the fraction of each shape that is shaded.



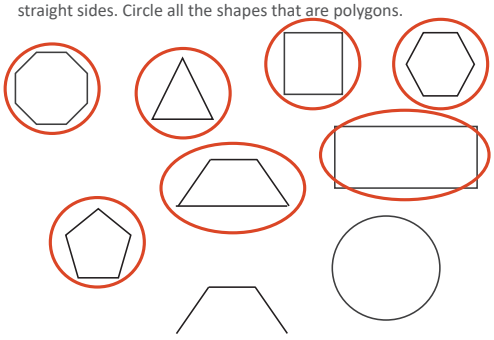
$\frac{3}{10}$ $\frac{4}{10}$ $\frac{2}{10}$ $\frac{6}{10}$

Draw a greater than or less than sign between the two fractions.

$\frac{2}{6} < \frac{5}{6}$ $\frac{7}{10} > \frac{4}{10}$

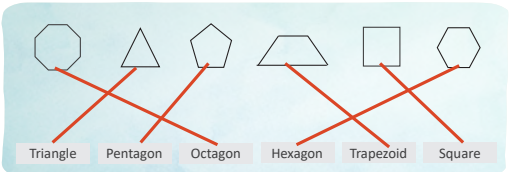
POLYGONS

Polygons are shapes that are closed and have three or more straight sides. Circle all the shapes that are polygons.



Additional Practice

Draw a line from each polygon to its name. (Hints: "Octa-" means 8. "Hexa-" means 6. "Penta-" means 5.)



INTRODUCTION TO MULTIPLICATION

Write the addition problem and multiplication problem shown by the array.

Addition Problem:	5 + 5 + 5 = 15
Multiplication Problem:	3 × 5 = 15

○○○○○
○○○○○
○○○○○

Additional Practice

Write the addition problem and multiplication problem shown by the array.

Addition Problem:	4 + 4 = 8
Multiplication Problem:	2 × 4 = 8

× × × ×
× × × ×

WEIGHT

Fill in the circle that shows the most reasonable weight of each item.

1 ounce is about the weight of a pencil. 1 pound = 16 ounces 1 ton = 2,000 pounds	1 gram is about the weight of a paper clip. 1 kilogram = 1,000 grams (about the weight of a pineapple)

Duck
- ○ 3 tons
- ● 3 pounds
- ○ 3 ounces

Glue Bottle
- ● 100 grams
- ○ ½ kilogram
- ○ 2 grams

Paper Clip
- ○ 3 kilograms
- ● 1 gram
- ○ 1 kilogram

Bike
- ● 20 pounds
- ○ 2 tons
- ○ 20 ounces

Additional Practice

Fill in the circle that shows the most reasonable weight of each item.

Grasshopper
- ○ 25 kilograms
- ○ 1 kilogram
- ● 2 grams

Dump Truck
- ● 20,000 pounds
- ○ 3 tons
- ○ less than 1 ounce

Horse
- ● 650 kilograms
- ○ ½ ton
- ○ 2 pounds

Shovel
- ○ 15 ounces
- ● 5 pounds
- ○ 10 tons

Lesson 91

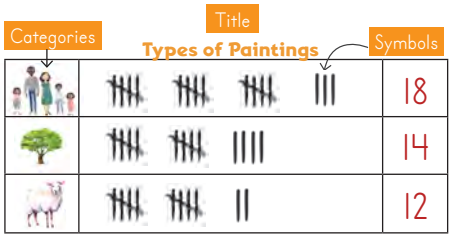
TALLY CHARTS AND PICTOGRAPHS

Money

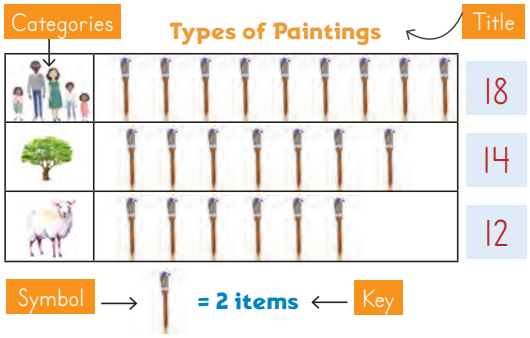
Take the bills from the math box and give the child several bills in a mixed-up pile (such as 2 $100 bills, 6 $20 bills, 4 $10 bills, 6 $5 bills, and 3 $1 bills) and have the child sort the money into like bills and count the bills. (Start with the highest value bills.) Repeat with different piles of bills several times.

○ Read to the child: Todd and his grandmother are going to the art museum where his grandmother's painting is being shown. She has given him a challenge to see how many paintings he can find that feature people, nature, and animals. He takes a notebook to write down his data. ***Data*** is information collected. Todd makes a ***tally chart*** to organize his data. Filling in a chart with marks that represent numbers is faster than writing out words or numbers.

When reading a chart, start by reading the title, the categories, and the symbols. Have the child find and point out these parts on the graph. Count the tally marks and write the number of paintings Todd saw in each category.



○ Read to the child: Todd created a pictograph of his data below. A ***pictograph*** is a graph that uses pictures to display data. A pictograph also includes a ***key*** that tells you the number represented by the picture or symbol. Have the child find and point to the symbol and key below. The key tells us that each paintbrush symbol represents 2 paintings. Count the paintbrushes by 2s and write the total for each row in the blue boxes.



○ Take out a piece of scratch paper. Read to the child: We are going to make a tally chart using the art gallery on the next page. Draw a chart on your scratch paper with three rows and three columns, just like the tally chart to the left. Next, write a title. For the categories write "people," "nature," and "animals." In each row draw tally marks to represent the number of paintings for each category. How many paintings do you see of each kind? Which category has the most paintings?

○ **Where Is Grandmother's Painting? Activity**: Read to the child: Each numbered painting corresponds to a numbered subtraction problem at the bottom of the page. Complete each problem. The problem that has an answer of 50 is Grandmother's painting.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
9	10	74	44	84	13	88	80	8	76	36	90	7	63
- 5	- 9	- 28	- 15	- 34	- 7	- 22	- 10	- 3	- 39	- 15	- 25	- 2	- 37
4	1	46	29	50	6	66	70	5	37	21	65	5	26

INDEPENDENT REVIEW

Write the correct number in each box.

100 less: 4,523

10 less: 4,613 | 4,623 | 4,633 :10 more

100 more: 4,723

100 less: 2,478

10 less: 2,568 | 2,578 | 2,588 :10 more

100 more: 2,678

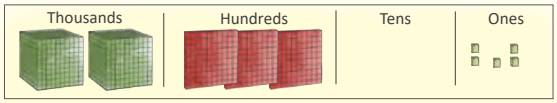
For each amount shown, circle the bills and coins you would use to equal the amount. (Hint: Circle the highest-value bills and coins you can use first.)

$31.16

$10 $20 $1 $50 $5 $5

$75.85

$10 $20 $1 $50 $5 $1



In the orange chart, write the number shown by the base-10 blocks.

Thousands	Hundreds	Tens	Ones
2,	3	0	5

Write the number of days in each month. If needed, reference the poem on page 152.

October	November	December
31	30	31

Lesson 92

TABLES AND BAR GRAPHS

Skip Counting

Have the child skip count backward by 25s from 200 to 25.

25 50 75 100 125 150 175 200

Time

- With the clock from the math box, have the child set the clock to the following times:

half past 1 | quarter to 3 | 4:33 | 11:17

- Have the child tell you what time noon is [12 PM] and what time midnight is. [12 AM]
- Have the child tell you how many seconds are in a minute, [60] minutes are in an hour, [60] and hours are in a day. [24]

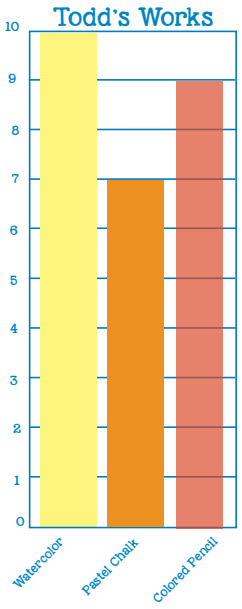
Read to the child: Look at the ***table*** to the right. A table shows numbers and descriptions, arranged in rows and columns. This table describes the types of art Todd made for his own art gallery at home. Point to the three types of art he used. How many watercolor paintings did he make? [10]

He also made 7 pastel chalk works of art and 9 colored pencil works of art. Write these numbers in the table in the correct squares.

Type	# of Works
Watercolor	10
Pastel Chalk	7
Colored Pencil	9

Todd used the data listed in the table to create a ***bar graph***. A bar graph is a graph that uses bars to display (or show changes in) data. The bars can run vertically (up and down) or horizontally (from left to right). The bars on this graph run vertically.

To read the bar graph, look at the category at the bottom of each bar. Place your finger on the watercolor column. Move your finger up to the top of the bar, and then slide it over to the scale on the left. What number are you pointing to? That means 10 watercolor paintings were made. How many pastel chalk works did he make? [7] He made 9 colored pencil works. Fill in the bar in the colored pencil column to represent this data.

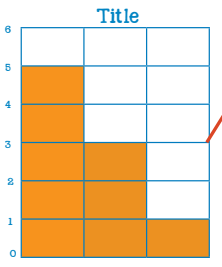


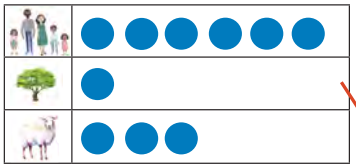
Use the information shown in the bar graph to answer these questions:

- Which category of art did Todd create the most of? watercolor
- Which category of art did he create the least of? pastel chalk
- How many more watercolor works were completed than pastel chalk works? 3
- How many total works did Todd complete? 26

Read to the child: Draw a line from the type of graph to its name.

Type	#
bikes	4
trucks	6
cars	3





dogs	𝍸 𝍸 𝍸 𝍸
cats	𝍸 𝍸
hamsters	𝍸

Bar Graph

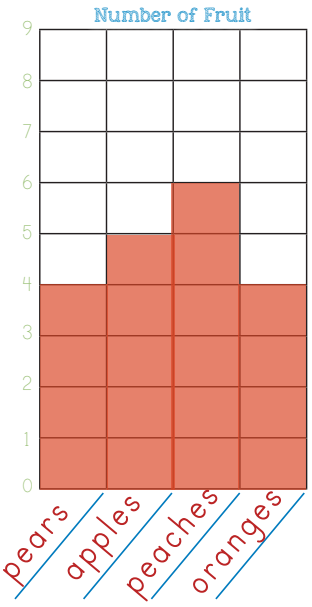
Table

Tally Chart

Pictograph

Read to the child: We are going to make our own table and bar graph. First, in the table, write the names of the four different fruits shown below (pears, apples, peaches, oranges). Count the number of each type of fruit below, and then write the totals in the "# of fruit" column. Next, using the data from the table, fill in the bar graph. List each fruit name along the bottom of the graph. Color in the bars to show the number of each fruit. Ask the child questions about the chart and bar graph.

Fruit Name	# of Fruit
pears	4
apples	5
peaches	6
oranges	4



INDEPENDENT REVIEW

Complete the subtraction problems. Don't forget the dollar sign and decimal point in your answer.

$$\begin{array}{r} \$6.63 \\ -\ \$4.12 \\ \hline \$2.51 \end{array} \qquad \begin{array}{r} \$8.56 \\ -\ \$5.32 \\ \hline \$3.24 \end{array}$$

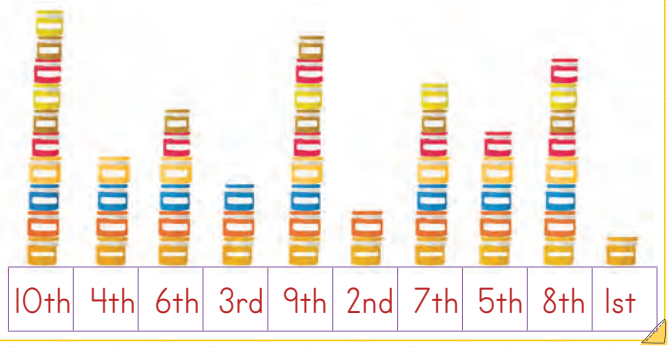
Circle the correct time.

3 HOURS FROM NOW	4 HOURS AGO
3:30 AM	6:00 PM
6:30 AM	4 PM
3:30 PM	4 AM
3 PM	2 PM

Write the number of days in each month in a leap year. If needed, reference the poem on page 152.

Complete the problems. Write the answers on the paintbrush.

Order the stacks of paints from shortest to tallest by writing the following under the correct stacks: 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th.



Lesson 93

PLOTTING AND INTERPRETING DATA

Writing in the Thousands

Say the numbers in purple aloud without the child seeing them, and have him or her write the numbers on the whiteboard. Remind the child to place the comma where you would say THOUSAND. 5,344 | 1,872 | 9,001

Mental Math

Have the child read each problem below and identify whether or not a doubles addition fact can be used to help complete the problem. Then have the child say the answer aloud.

14 - 7	13 - 3	10 - 5	18 - 9	8 - 4	12 - 6
7	10	5	9	4	6

○ **What Would You Weigh? Game**: Take the rocket from the math box. Read to the child: We are going to use a graph to discover which planet you would weigh the most on, supposing you weigh 60 pounds on Earth. Place your rocket on the first planet on the next page and complete the subtraction problem. Write the answer in the table below. This is your weight for this planet. Move your rocket to the next planet and continue until you have filled in the table. Then answer the questions below the table.

○ Read to the child: Did you know that there are four planets in our solar system with rings? The total known number of rings for each planet is shown in the blue boxes below. Draw the correct number of symbols (circles) to represent the number of rings around each planet. Note that each circle represents 2 rings, so you can skip count by 2s as you write the symbols on the chart. Draw half a ring to represent one ring instead of two. Then answer the questions below.

Planets with Rings

Saturn	○ ○ ○ ○	8
Jupiter	○ ○	4
Uranus	○ ○ ○ ○ ○ ○ ◐	13
Neptune	○ ○ ○	6

○ = 2 rings

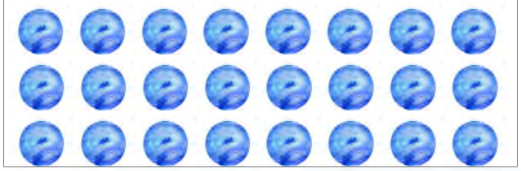
- Which planet has the most rings? Uranus
- How many more rings does Uranus have than Jupiter? 9
- How many rings do the planets have altogether? 31

Planet	Mercury	Venus	Earth	Mars	Jupiter	Saturn	Uranus	Neptune
Weight	23	55	60	23	140	56	55	67

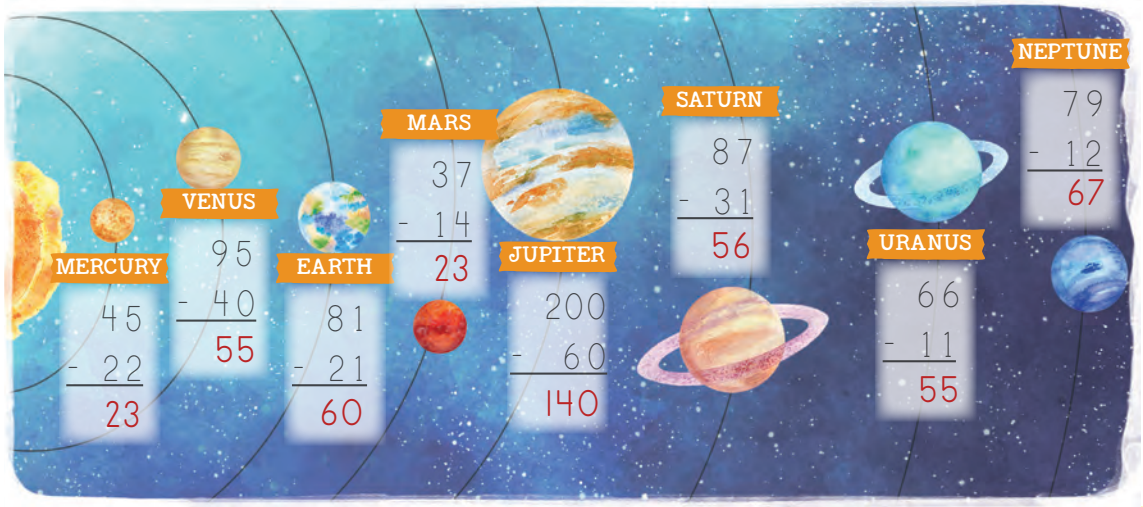
- On which planet would you weigh the most? Jupiter
- How much more would you weigh on Jupiter than on Earth? 80 lb
- On which planets would you weigh the least? Mercury and Mars
- How much less would you weigh on Venus than on Earth? 5 lb

Read to the child: Write the addition problem and multiplication problem shown by each array.

Addition Problem:	8 + 8 + 8 = 24
Multiplication Problem:	3 × 8 = 24

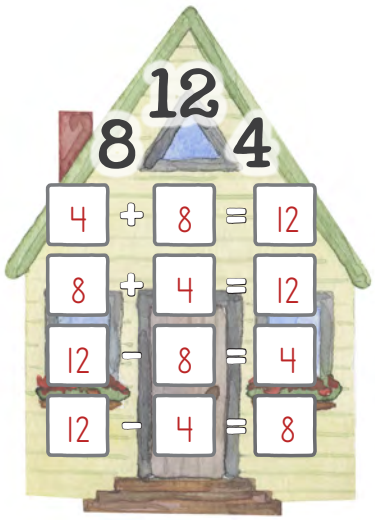


Addition Problem:	9 + 9 = 18
Multiplication Problem:	2 × 9 = 18



INDEPENDENT REVIEW

Write the fact family using the numbers at the top.



Write the number of days in each month in a leap year. If needed, reference the poem on page 152.

February	October	December
29	31	31

Complete the subtraction problems. Don't forget to borrow and regroup.

2 1 / 3 3 − 26 = 7	4 1 / 5 1 − 48 = 3	7 1 / 8 4 − 39 = 45

Fill in the missing numbers, counting by 1s. Don't forget the commas.

4,998	4,999	5,000	5,001

Round each number to the nearest 10.

58	60				
51	50	59	60	52	50
55	60	54	50	57	60

Lesson 94

FINDING THE MEDIAN

Skip Counting

Have the child skip count backward by 3s from 21 to 3.

Fractions

Play the "Fraction Dice Game." (Instructions are on page 145.)

Read to the child: Today we are going to learn how to find the ***median***. The median is the number in the middle of a list of numbers when the numbers are in order from least to greatest. The table to the right shows the number of miles the Garcia family went on a bike ride. Tell me what days they biked and how many miles they went each day. We are going to use this data to find the median. The boxes below show the numbers from the table sorted from least to greatest. The middle number is circled; this is the median.

Bike Ride	# of miles
Monday	2
Wednesday	1
Friday	6

1 (2) 6

Read to the child: Use the tables to fill in the blue boxes from least to greatest, and then circle the median number.

Bike Ride	# of miles
Tuesday	3
Thursday	5
Saturday	4

3 (4) 5

Bike Ride	# of miles
Monday	7
Tuesday	2
Wednesday	3

2 (3) 7

Bike Ride	# of miles
Thursday	8
Friday	4
Saturday	1

1 (4) 8

Read to the child: Help Miguel ride his bike home. Start at the bike and go through the maze. As you go, stop when you reach a circled letter. Find the matching letter on the side and say aloud the median of the three numbers listed beside it. You can then continue through the maze.

INDEPENDENT REVIEW

Garcia Family Bike Rides

Fill in the missing information on the bike chart for the Garcia family. Make sure to include AM or PM.

Day of the Week	Length of Ride	Time Started	Time Ended
Monday	1 hour 30 minutes	10:00 AM	11:30 AM
Tuesday	2 hours	1:00 PM	3:00 PM
Wednesday	30 minutes	6:00 PM	6:30 PM
Thursday	1 hour 30 minutes	7:30 PM	9:00 PM
Friday	1 hour 30 minutes	7:00 AM	8:30 AM
Saturday	3 hours	9:00 AM	12:00 PM

Lesson 95

CENTIMETERS, METERS, AND KILOMETERS

Spelling Numbers

- Have the child write "sixteen," "seventeen," and "eighteen" on the whiteboard.

Skip Counting

- Have the child skip count backward by 3s from 21 to 3.

Read to the child: The tallest mountain on Earth is Mount Everest. It reaches just over 8,848 meters into the sky. You could also say that it is 8.8 kilometers tall, or 884,800 centimeters. Centimeters, meters, and kilometers are all measurements of distance or length in the metric system. You have already learned about kilometers. Look at the chart below. How many centimeters are in a meter? [100] How many meters are in a kilometer? [1,000]

Centimeters (cm)	Meters (m)	Kilometers (km)
This line is one centimeter long.	100 centimeters	1,000 meters
	A baseball bat is about 1 meter long.	A long bridge can be about a kilometer long.

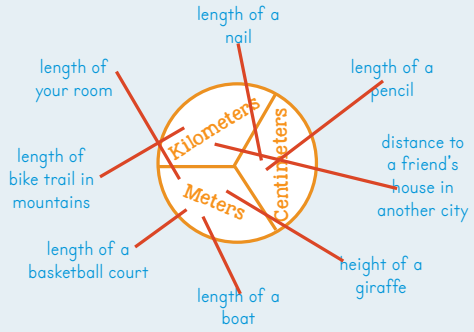
Circle the most reasonable units for the measurements below.

Mount Everest is 8,848 _____ tall. cm (m) km

A rescue helicopter has a length of about 30 _____. km cm (m)

A hiker's arm is about 5 _____ wide. m (cm) km

Read to the child: Draw a line from each item below to the units that are more reasonable.



Race to the Rescue Game: Take the helicopter from the math box.
Read to the child: A group of climbers needs to be rescued as quickly as possible. Place your helicopter on "Start" and start a timer for one minute. Move your helicopter to each circle representing a climber and say aloud the most reasonable unit of measurement to answer the statement at that number. If the timer goes off before you finish, start again. Continue trying until you rescue all the climbers before the time runs out!

1. The hike from the base of Mount Everest to the top is 20 km.
2. A packhorse is about 2 m long.
3. A water bottle is 20 cm long.
4. A glacier near Mount Everest is 200 m deep.
5. A rescue rope is 60 m long.
6. The rescue helicopter flies 4 km to the 1st climber.

INDEPENDENT REVIEW

Draw a line to divide the hiking supplies that will be packed in each backpack into two equal groups. If there is one item left, circle it.

Circle the time shown on the clock.

Jim is waking up.

Quarter to 7:00 PM

Quarter past 7:00 AM

Quarter to 7:00 AM

Complete the subtraction problems. Don't forget to borrow and regroup.

$\overset{6}{\cancel{7}}\overset{1}{3} - 38 = 35$	$\overset{4}{\cancel{5}}\overset{1}{2} - 29 = 23$	$\overset{5}{\cancel{6}}\overset{1}{4} - 48 = 16$

Write and complete the problem for the story.

Last year, Julia hiked 10 miles. This year, she has hiked 25 miles. How many more miles did she hike this year?

25 − 10 = 15

Check your addition problems with subtraction.

$6 + 3 = 9$	$7 + 2 = 9$	$8 + 4 = 12$	$5 + 1 = 6$
$9 - 3 = 6$	$9 - 2 = 7$	$12 - 4 = 8$	$6 - 1 = 5$

Lesson 96

GALLONS, QUARTS, PINTS, AND CUPS

Skip Counting

- Have the child skip count by 3s from 3 to 21.
- Have the child skip count backward by 25s from 200 to 25.

25 50 75 100 125 150 175 200

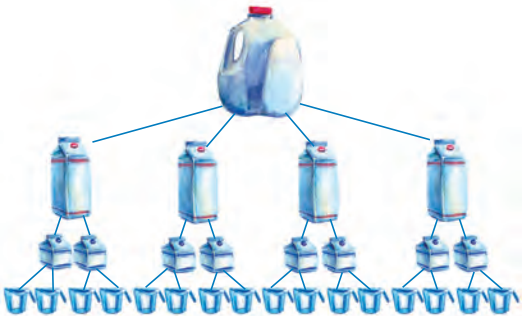
Mental Math

Have the child identify if the problem is doubles addition plus one or not and say the answer aloud.

$8 + 7 = 15$	$6 + 3 = 9$	$7 + 6 = 13$	$9 + 8 = 17$	$5 + 6 = 11$	$7 + 4 = 11$

○ Read to the child: In previous lessons you have learned how to measure the length of an object. Today you will learn how to measure ***volume,*** which is the amount of space a liquid or an object takes up. In the US customary system, volume is measured using gallons, quarts, pints, and cups. Point to each item below, and I will tell you the volume of the item.

○ Read to the child: Point to the gallon. Point to the quarts. How many quarts are under the gallon? [4] There are four quarts in a gallon. Point to the pints. How many pints are under each quart? [2] There are two pints in a quart. How many pints are under the gallon? [8] Continue asking questions, such as how many cups in a gallon? [16] How many cups in a pint? [2] etc.



○ Read to the child: Look at the images in the left column of this page as you do this activity. Circle the more reasonable unit to use to measure the volume of each item. Each unit will be used once.

bathtub	soap bottle	perfume	potted plant
cups	gallons	cups	cups
gallons	pints	quarts	quarts

INDEPENDENT REVIEW

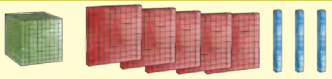
Write the standard form and expanded form for each set of base-10 items.

2,212

2,000 + 200 + 10 + 2

4,116

4,000 + 100 + 10 + 6



1,530

1,000 + 500 + 30 + 0

Complete the subtraction problems.

5 / 61 − 28 = 33	6 / 75 − 39 = 36	7 / 83 − 44 = 39

Write the number of days in each month. If needed, reference the poem on page 152.

March	November	September
31	30	30

Complete the problems. Then round the sums (answers) to the nearest 10 and write them in the purple boxes.

Tens	Ones		Tens	Ones
1				
3	6		1	2
+ 5	5		+ 4	5
9	1		5	7
Rounded Sum 90			Rounded Sum 60	

Fill in the missing addend. If needed, draw the missing number of dots on each domino to help you find the answer.

1 + 4 = 5

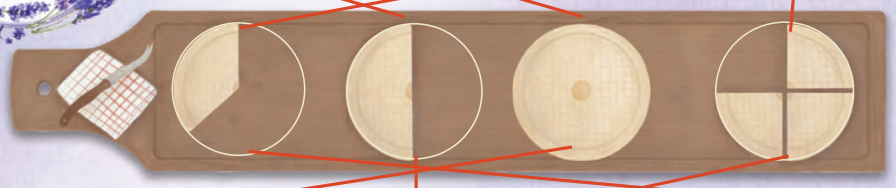
4 + 5 = 9

2 + 6 = 8

Cheese Board Fractions

Draw a line from each cheese wheel to the fraction name above the cheese board that shows how many sections of cheese are left. Then draw a line from the fraction below the cheese board to the matching cheese.

One-Half Whole One-Third Three-Fourths



1 $\frac{1}{2}$ $\frac{3}{4}$ $\frac{1}{3}$

Write the fraction of each cheese wheel that is left in the boxes below the cheese board.

$\frac{2}{2}$ $\frac{2}{3}$ $\frac{2}{4}$

Lesson 97

CUPS, HALF CUPS, TABLESPOONS, TEASPOONS, AND HALF TEASPOONS

Skip Counting

Have the child skip count backward by 3s from 30 to 3. Use the chart if needed.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

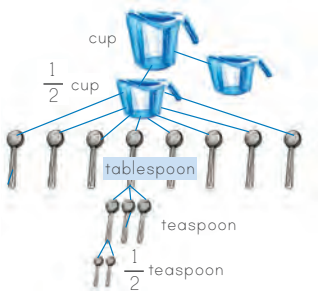
Mental Math

Have the child add 100 to each number by increasing the digit in the hundreds place by 1.

6,780 → 6,880 5,235 → 5,335 4,003 → 4,103 3,210 → 3,310

○ Read to the child: The following units are additional ways to measure volume in the US customary system. Remember, volume is the amount of space a liquid or object takes up. Point to the cup on the far left. This was the smallest unit of measure in the last lesson, but we will now learn about even smaller units. Point to each unit below, starting with the largest, and repeat its name after me.

○ Read to the child: Point to the cup. Point to the half cups. How many half cups are under the cup? [2] There are two half cups in a cup. Point to the tablespoons. How many tablespoons are under a half cup? [8] Point to the teaspoons. How many teaspoons are under a tablespoon? [3] There are three teaspoons in a tablespoon. How many half teaspoons are under the teaspoon? [2]



Use comparison symbols >, <, = to make the statements true.

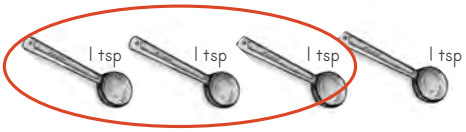
½ teaspoon < 1 tablespoon

1 teaspoon < 1 tablespoon

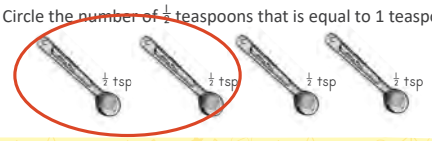
½ teaspoon < 1 teaspoon

3 teaspoons = 1 tablespoon

Circle the number of teaspoons that is equal to a tablespoon.



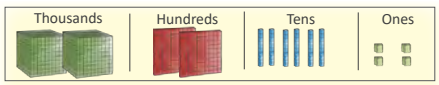
Circle the number of ½ teaspoons that is equal to 1 teaspoon.



INDEPENDENT REVIEW

Help each bee get over the honeycomb to reach the flower. Add two numbers that are side by side and write the answer in the hexagon above them. Continue until you reach the flower. The first one is done for you.

On each orange chart, write the digit in each place value shown by the base-10 blocks or the number. Don't forget the commas.



Thousands	Hundreds	Tens	Ones
2,	2	6	4

7,542

Thousands	Hundreds	Tens	Ones
7,	5	4	2

5,420

Thousands	Hundreds	Tens	Ones
5,	4	2	0

Check your addition problems with subtraction. After the first problem, write the subtraction problem for the other problems.

5 + 3 = 8 → 8 - 3 = 5

7 + 4 = 11 → 11 - 4 = 7

3 + 8 = 11 → 11 - 8 = 3

6 + 5 = 11 → 11 - 5 = 6

Lesson 98

COMPARING AND ORDERING VOLUMES IN LITERS AND MILLILITERS

Writing Numbers & Expanded Form

- Have the child write "7,804" and "9,004" on the whiteboard.
- Have the child write the expanded form for 5,326.

○ Read to the child: Liters and milliliters are metric units used to measure volume in most countries outside the United States. A milliliter is a unit used to measure small amounts of liquid. One milliliter is about the same as 20 drops of water. A liter is a unit used to measure larger amounts of liquid. One liter can fill a large water bottle. Point to each unit below and say its name.


1 milliliter


1 liter

Each picture shows a different volume of liquid. Choose the more reasonable unit of measurement to use for each picture by drawing a line to either milliliter or liter.

Milliliters	Liters
A milliliter is about the same as 20 drops of water.	1,000 milliliters
	A bottle of water is about 1 liter.

○ Take a dice from the math box. Read to the child: Look at the table above. How many milliliters are in a liter? [1,000] How many milliliters are in 2 liters? To find out, you would write three 0s at the end of the number of liters. Roll the dice and write the number in the first liters square in the table below. Then convert that number to milliliters by writing that number in the first square in the milliliters row and writing three 0s at the end. Continue rolling, writing, and converting until all the columns are filled.

Liters	Answers will vary.		
Milliliters			

○ Read to the child: For both groups of bottles, put each bottle in order below based on its volume with number one being the greatest volume.

3 2 1 | 1 3 2

INDEPENDENT REVIEW

Complete the subtraction problems. Don't forget to borrow and regroup.

$73 - 68 = 5$ (regrouped: 6, 13)

$52 - 28 = 24$ (regrouped: 4, 12)

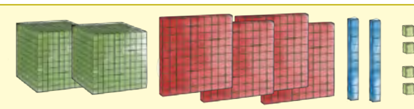
$44 - 39 = 5$ (regrouped: 3, 14)

Write and complete the problem for the story.

John and his family are making bread. The recipe calls for 5 cups of flour. John carefully puts 3 cups of flour in the bowl. How many cups of flour does he still need to put in?

5 c − 3 c = 2 c

Write the standard and expanded forms shown by the base-10 blocks and the number word.



2,424

2,000 + 400 + 20 + 4

seven thousand, two hundred sixty-seven

7,267

7,000 + 200 + 60 + 7

Write your birthday including the month, day, and year.

Answers will vary.

Write one of your parents' phone numbers in this format: 429-555-4588.

Answers will vary.

Lesson 99

ADDITION AND SUBTRACTION MEASUREMENT PROBLEMS

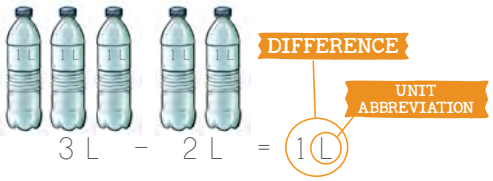
Time

Using the clock from the math box, have the child set the following times on the clock.

4:25 4:27 6:40 6:50 6:58 7:10 7:16

○ Read to the child: Remember that a bottle of water has a volume of about 1 liter. If we have two liters of water in the cupboard and then add one more liter, we would have three liters of water as shown below. The answer to an addition problem is called the ***sum***. The answer is written with the unit abbreviation—in this case, "L" is for liter.

○ Read to the child: If we have three liters of water in the cupboard and take two out, we have one liter of water left. The answer to a subtraction problem is called the ***difference***. Again, the answer is written with the unit abbreviation.



○ Read to the child: Complete the addition and subtraction problems below. Remember to write the "L" for liter. Then circle if the answer is a sum or a difference.

5 L + 6 L = 11 L — SUM / DIFFERENCE

4 L − 2 L = 2 L — SUM / DIFFERENCE

8 L − 3 L = 5 L — SUM / DIFFERENCE

○ Read to the child: We have two full liters and a bottle that is half full. Half of a liter is 500 milliliters. The abbreviation for milliliters is "mL." Point to it in the equation below. If we add three more liters and a bottle that only has 100 milliliters left, what would be the sum? Combine the liters and milliliters separately:

2 L + 3 L = 5 L 500 mL + 100 mL = 600 mL

2 L 500 mL + 3 L 100 mL = 5 L 600 mL

○ Read to the child: Complete the addition problems. Remember to write the unit abbreviations.

3 L 300 mL + 1 L 200 mL = 4 L 500 mL

5 L 100 mL + 4 L 400 mL = 9 L 500 mL

INDEPENDENT REVIEW

Write the correct number in each box.

	10 less	
	3,479	
1 less: 3,488	3,489	3,490 : 1 more
	3,499	
	10 more	

Write the fraction shown of each shape that is shaded. In the bottom box, write the total number of parts. In the top box, write the number of parts shaded.

1/2	2/4	4/4	3/4

Check your addition problems with subtraction. After the first problem, write the subtraction problem.

5 + 2 = 7 → 7 − 2 = 5

6 + 4 = 10 → 10 − 4 = 6

7 + 8 = 15 → 15 − 8 = 7

4 + 5 = 9 → 9 − 5 = 4

Complete the subtraction problems.

42 − 27 = 15	83 − 47 = 46	81 − 56 = 25	77 − 68 = 9	64 − 48 = 16	90 − 42 = 48

Lesson 100

IDENTIFYING PARTS OF A SET

Skip Counting

Have the child skip count by 4s from 4 to 28 once or twice. If needed, have the child use the chart.

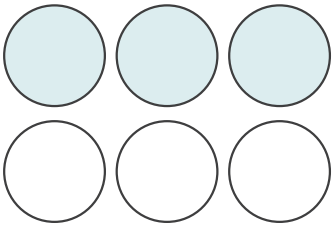
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Mental Math

Have the child add 100 to each number.

500 + 100	3,000 + 100	5,100 + 100
600	3,100	5,200

○ Read to the child: Look at the group or set of circles below. There are 6 total circles, and 3 of the 6 are blue. The blue circles represent a part of the whole set. Look at the fraction to the right of the set. Point to the 6 representing how many are in the whole set. Point to the 3 representing the part of the set that is shaded.



PART $\frac{3}{6}$ WHOLE

○ Read to the child: For each group of airplanes below, circle the correct fraction for the specified set.

RED

$\frac{3}{6}$ $\frac{4}{5}$ $\frac{2}{5}$

LARGE

$\frac{3}{8}$ $\frac{4}{8}$ $\frac{3}{5}$

SMALL

$\frac{5}{8}$ $\frac{5}{7}$ $\frac{2}{5}$

○ **Above the Clouds Game**: Take an airplane from the math box. Read to the child: Place an airplane on "START." Look at the group of purple and blue birds near your plane. Write how many birds are in the whole set under the fraction line. Then write the part specified in the box above the fraction line. Fly your plane clockwise in a circle and do the same for the other four groups.

INDEPENDENT REVIEW

The first box contains the circled date. In the other boxes, write yesterday's and tomorrow's dates.

June 30, 2022

Yesterday: June 29, 2022

Tomorrow: July 1, 2022

Fill in the circle that shows the most reasonable distance or length for each item. It takes about 20 minutes to walk a mile. A meter is about as long as a wagon.

Miles/Kilometers

Yards/Meters

a long hike
- ○ 100 yards
- ○ 10 yards
- ● 10 kilometers

a driveway
- ● 15 meters
- ○ 15 miles
- ○ 1 yard

the length of a car
- ● 4 meters
- ○ 3 miles
- ○ 120 yards

Complete the problems. Then round the sums (answers) to the nearest 10 and write them in the purple boxes.

Tens	Ones
1	
4	7
+4	5
9	2

Rounded Sum: 90

Tens	Ones
1	
3	9
+3	6
7	5

Rounded Sum: 80

Complete the addition problems. Remember to write the unit abbreviations.

4 L 300 mL + 2 L 200 mL =	6 L 500 mL
2 L 100 mL + 4 L 500 mL =	6 L 600 mL
5 L 100 mL + 3 L 400 mL =	8 L 500 mL

Write the number of days in each month. If needed, reference the poem on page 152.

July	August	September
31	31	30

October	November	December
31	30	31

Hidden Numbers

Six numbers are hidden in this picture. Color the objects that contain the numbers. In the blank boxes on the left, write the number word for each hidden number.

- eleven
- twelve
- fourteen
- seventeen
- eighteen
- nineteen

Complete the problems.

160 - 10 =	150
1,389 - 1 =	1,388
135 - 10 =	125
1,422 - 1 =	1,421
267 - 10 =	257
2,000 - 1 =	1,999
3,000 - 1 =	2,999

Lesson 101

FRACTIONS: PART 6

Mental Math

Read to the child: I will say problems aloud. You use the adding 9 mental math strategy to tell me each answer aloud.

9 + 10	9 + 34	65 + 9	9 + 23	81 + 9	9 + 27
19	43	74	32	90	36

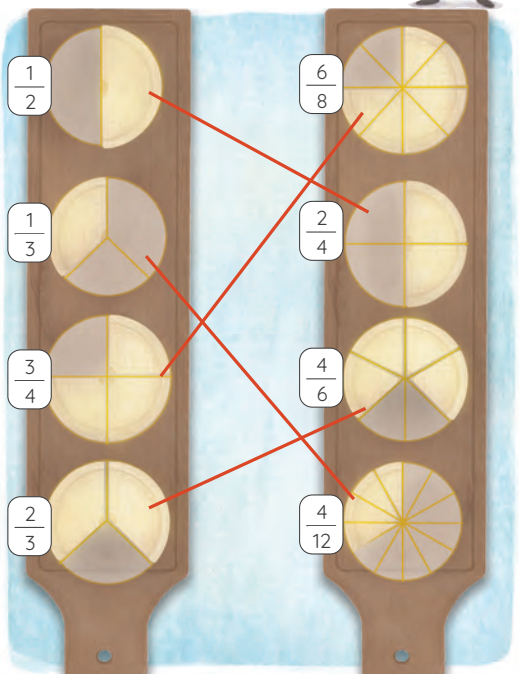
Fractions

Play the "Fraction Dice Game." (Instructions are on page 145.)

Read to the child: Look at the fractions below. Each circle has an equal amount colored in. However, each circle is divided into a different number of parts, so the fractions are different. When fractions have different numerators and denominators but are equal to each other in the amount they represent, they are ***equivalent fractions***. Equivalent means equal.

$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$

Read to the child: Remember Victor, whose family owns a cheese factory? The cheese wheels below have been cut into different sections. He is trying to match up the cheese wheels that show equivalent fractions. Draw lines to connect equivalent fractions.



INDEPENDENT REVIEW

For each group of leaves below, circle the correct fraction for the specified set.

RED

$\frac{3}{6}$ $\frac{3}{5}$ $\frac{2}{5}$

GREEN

$\frac{5}{6}$ $\frac{2}{5}$ $\frac{3}{5}$

Complete the addition problems. Remember to write the unit abbreviations.

6 L 200 mL + 2 L 300 mL = 8 L 500 mL

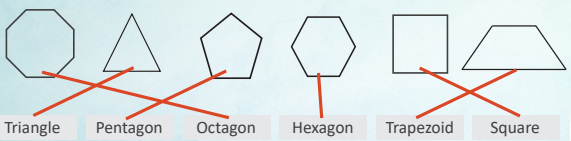
4 L 300 mL + 4 L 500 mL = 8 L 800 mL

2 L 100 mL + 6 L 400 mL = 8 L 500 mL

Complete the subtraction problems.

$$\begin{array}{r} 8\,13 \\ -\ 26 \\ \hline 67 \end{array} \qquad \begin{array}{r} 5\,15 \\ -\ 47 \\ \hline 18 \end{array} \qquad \begin{array}{r} 6\,11 \\ -\ 58 \\ \hline 13 \end{array}$$

Draw a line from each shape to its name. (Hints: "Octa-" means 8. "Hexa-" means 6. "Penta-" means 5.)



Triangle Pentagon Octagon Hexagon Trapezoid Square

Circle the bills you would use to equal the dollar amount. Use the fewest number of bills. (Hint: Circle the highest value bills you can use first.)

$935

Your Wonderful Day!

AM starts at midnight and goes to 11:59 AM.
PM starts at noon and goes to 11:59 PM.

How wonderful each day is depends on your attitude, not what happens or doesn't happen to you. For each clock write the time shown on the clock, including the AM/PM.

You are helping your mother clean the kitchen before lunch. You are excited to go play but don't want to leave too much work for her.

11 : 31 AM

You are on a nature walk. The sun is hot, so you enjoy the cool shade of a beautiful tree.

3 : 28 PM

You are helping your brother finish his schoolwork after lunch. He is getting frustrated, but you kindly help him finish.

12 : 44 PM

You ask your older brother to play with you, but he is too busy. He says he can play later, so you find something else fun in the meantime.

4 : 16 PM

You are trying to sleep, but thunder woke you up. You are grateful to have shelter in the storm.

11 : 51 PM

You are waking up early today to get ready for a long trip. You are so excited to visit Grandma!

5 : 44 AM

Lesson 102

IDENTIFYING AND WRITING MIXED NUMBERS

Skip Counting

Have the child skip count by 4s from 4 to 28 once or twice. If needed, have the child use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Mental Math

Have the child add 100 to each number.

500 + 100	2,000 + 100	4,300 + 100
600	2,100	4,400

○ Read to the child: This monkey has collected bananas to eat. He collected three whole bananas and $\frac{1}{2}$ of a banana. He collected a ***mixed number*** of bananas. A mixed number includes a whole number and a fraction. Point to the mixed number in orange below. The 3 is the whole number representing the 3 whole bananas. The $\frac{1}{2}$ is the fraction representing half of a banana.

1 whole banana
1 whole banana
1 whole banana
$\frac{1}{2}$ of a banana

whole number: 3 fraction: $\frac{1}{2}$

mixed number

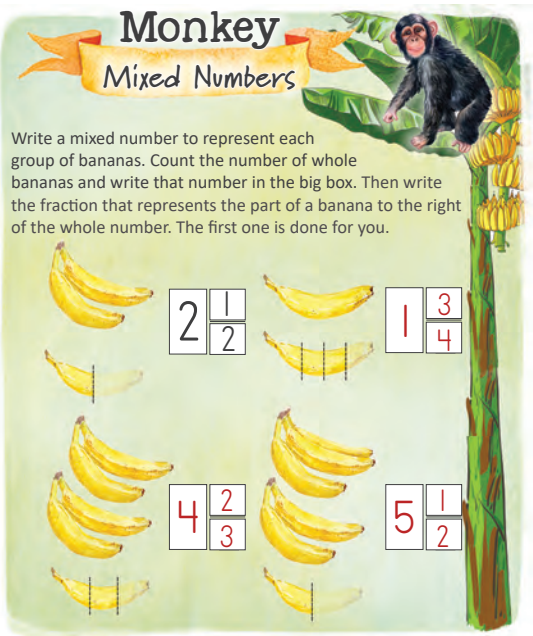
○ Have the child circle the mixed numbers.

$7\frac{1}{2}$ $\frac{3}{4}$ $4\frac{1}{3}$ $\frac{4}{5}$

$\frac{4}{6}$ $10\frac{2}{5}$ $\frac{7}{8}$ $4\frac{7}{9}$

Monkey Mixed Numbers

Write a mixed number to represent each group of bananas. Count the number of whole bananas and write that number in the big box. Then write the fraction that represents the part of a banana to the right of the whole number. The first one is done for you.



INDEPENDENT REVIEW

Complete the problems. Then round the differences (answers) to the nearest 10 and write them in the purple boxes.

56 − 22 = 34	74 − 23 = 51
Rounded Difference: 30	Rounded Difference: 50

Complete the subtraction problems. Borrow and regroup if needed.

72 − 58 = 14	71 − 56 = 15	82 − 33 = 49
66 − 42 = 24	93 − 46 = 47	85 − 46 = 39

Write the correct number in each box.

	10 less		
	5,422		
1 less	5,431	5,432	5,433
	5,442		1 more
	10 more		

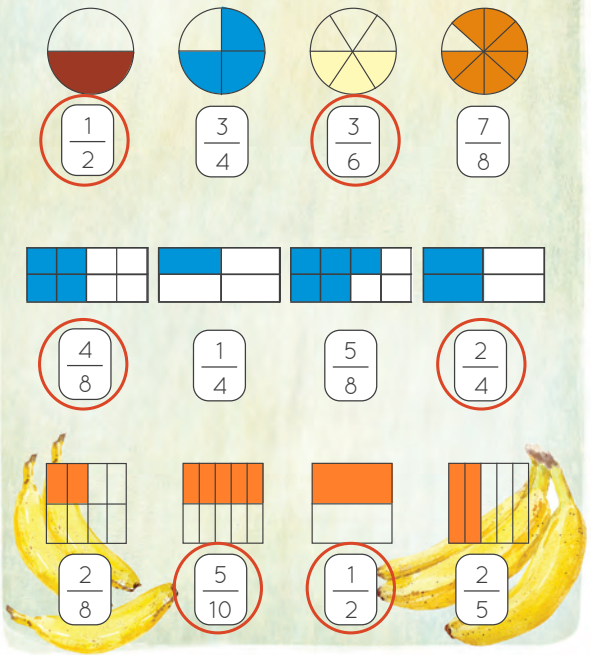
Circle the bills you would use to equal the dollar amount. Use the fewest number of bills. (Hint: Circle the highest-value bills you can use first.)

$1,252

$10 $1 $100 $500 $500
$1 $50 $100 $20 $100

Is It Equivalent?

In each row circle the two fractions that are equivalent fractions.



Write the addition problem and multiplication problem shown by each array.

Addition Problem:	5 + 5 + 5 = 15
Multiplication Problem:	3 × 5 = 15
× × × × × × × × × × × × × × ×	
Addition Problem:	10 + 10 = 20
Multiplication Problem:	10 × 2 = 20
× × × × × × × × × × × × × × × × × × × ×	

With Xs, show an array that represents the addition and multiplication problems.

Addition Problem:	2 + 2 + 2 + 2
Multiplication Problem:	4 × 2
XX XX XX XX	

Lesson 103

REPRESENTING A GIVEN FRACTION

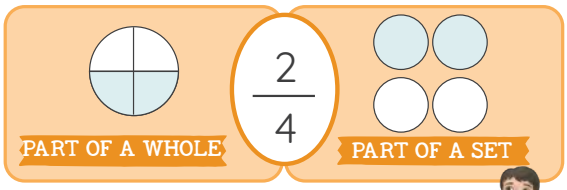
Skip Counting

- Have the child count by 50s from 500 to 1,000.
- Have the child count by 5s from 900 to 1,000.

Spelling Numbers

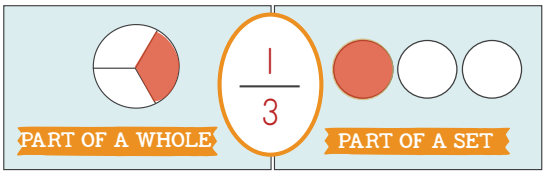
Have the child write "twelve," "sixteen," "seventeen," and "eighteen" on the whiteboard.

○ Read to the child: The fraction below is represented in two different ways: as part of a whole and as part of a set. The blue colored sections represent the part.

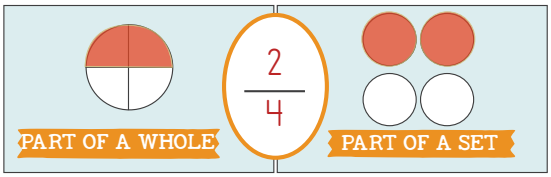


○ Read to the child: Do you remember Thomas? He has diabetes. He loves to play soccer. When he works hard and does his best in a game, he feels good.

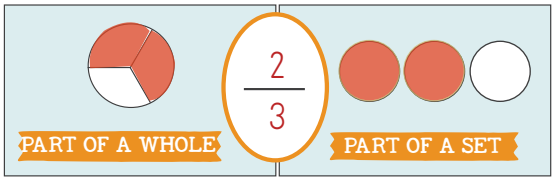
His team played a game last Saturday and had so much fun. The team scored three goals, and Thomas was so excited that he scored one of those goals. We are going to write a fraction that represents the number of goals Thomas had compared to the total number of goals for his team. Write a one on the top of the line for Thomas' one goal. This is the part. Color in one section of the circle on the left and one circle in the set on the right. Write a three below the line. This is the total or whole.

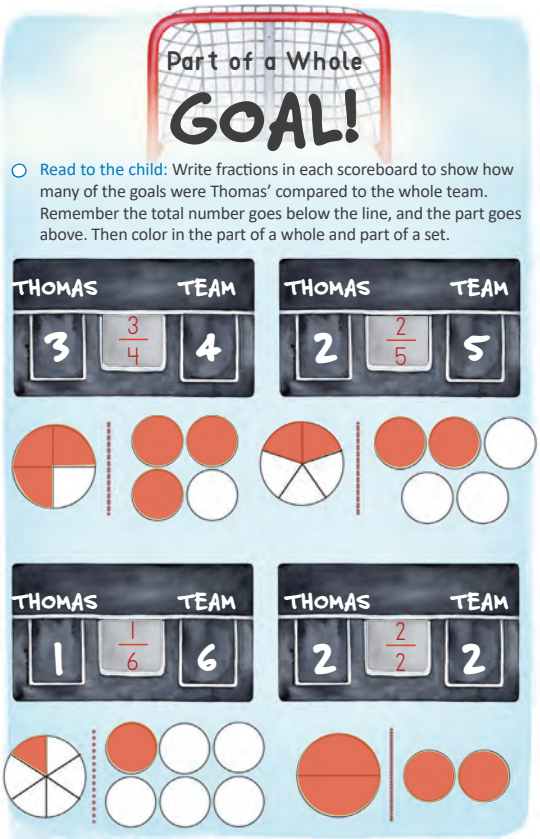


○ Read to the child: In another game, Thomas scored two of the team's four goals for the game. Write the fraction below to show how many of the goals were Thomas' compared to the whole team. Remember the total number goes below the line and the part goes above. Then color in the part of a whole and part of a set.



○ Read to the child: In their final game of the season, Thomas scored two of the three goals his team made in the game. Write the fraction below to show how many of the goals were Thomas' compared to the whole team. Remember the total number goes below the line, and the part goes above. Then color in the part of a whole and part of a set.

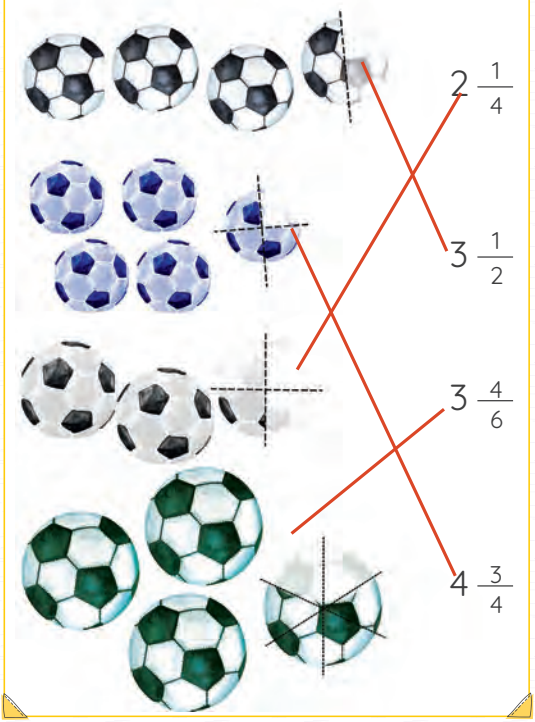




○ Read to the child: Write fractions in each scoreboard to show how many of the goals were Thomas' compared to the whole team. Remember the total number goes below the line, and the part goes above. Then color in the part of a whole and part of a set.

INDEPENDENT REVIEW

Draw a line from each group of balls to the mixed number it represents.



Use this calendar to fill in the boxes below.

October 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

1. Write the date (including month and year) one week after the date circled in green.

   October 25, 2024

2. Write the date (including month and year) one week before the date circled in green.

   October 11, 2024

3. Circle the day of the week that November 1st will be.

   Sunday Monday Tuesday Friday

Write your birthday including the month, day, and year.

Answers will vary.

Your family is studying amphibians for science. They want to know which one you like best. Put the creatures in order of those you like most to those you like least by writing the ordinal numbers in each circle:

1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th

Write one of your parents' phone numbers in this format: 429-555-4588.

Answers will vary.

Lesson 104

QUADRILATERALS

Skip Counting

Have the child skip count by 4s from 4 to 28 once or twice. If needed, have the child use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Mental Math

Have the child add 100 to each number.

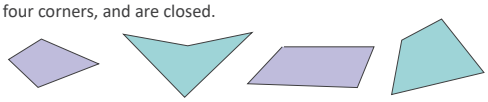
300 + 100	2,000 + 100	4,100 + 100
400	2,100	4,200

○ Read to the child: You have learned about many shapes in past lessons. ***Quadrilaterals*** are a type of polygon with only four sides. Quadrilaterals are shapes that are closed and have four straight sides and four corners. The word "quad-" means four. A rectangle is an example of a quadrilateral. Below are more examples of shapes that are quadrilaterals. Point to each shape and say its name.

Some Examples of Quadrilaterals

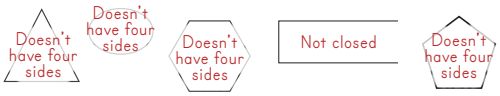
Rhombus | Diamond | Trapezoid | Rectangle | Square

These are also examples of quadrilaterals; they have four sides, four corners, and are closed.

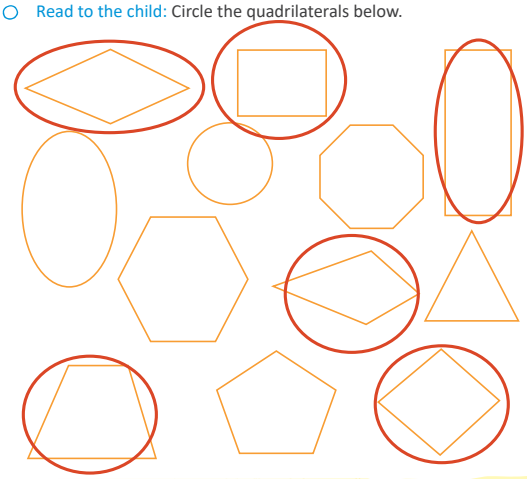


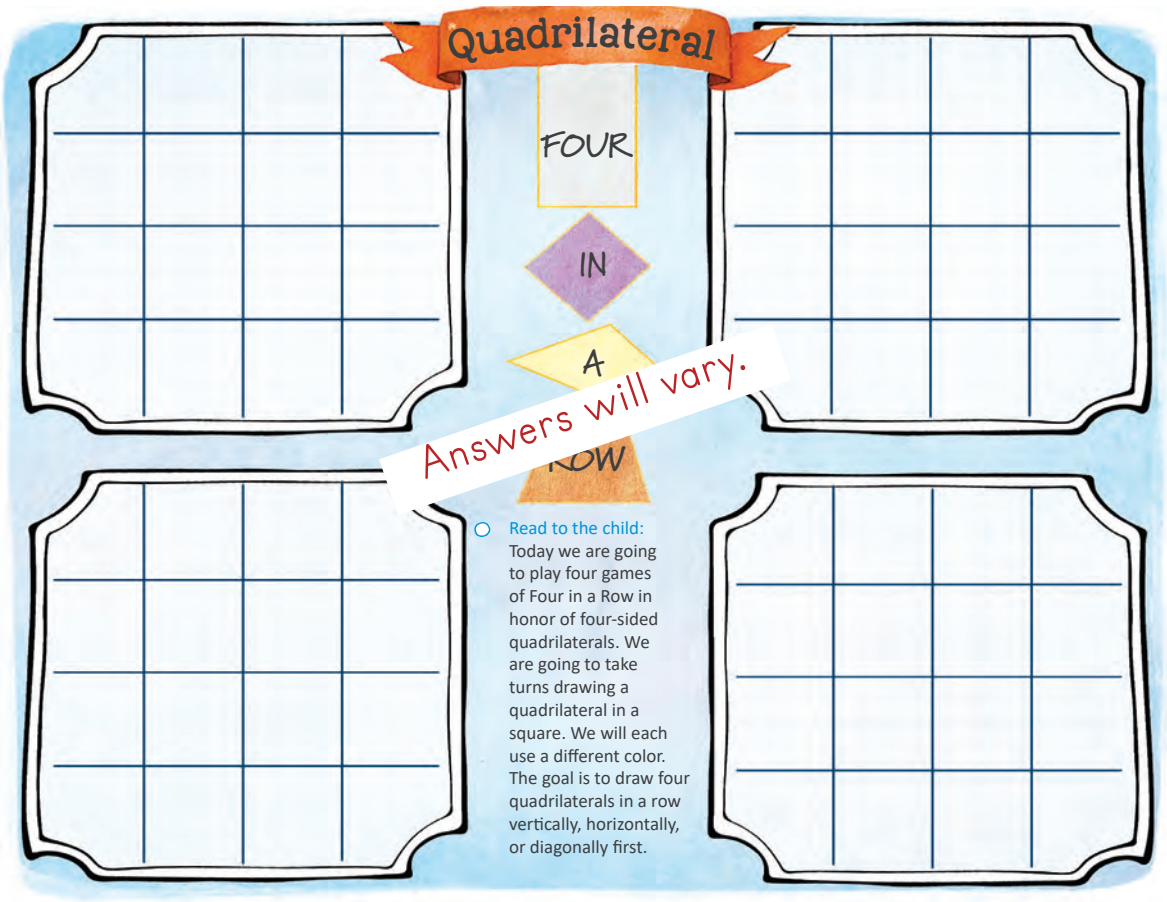
○ Read to the child: The following are not quadrilaterals for one of three reasons: 1) they are not closed, 2) they have curved lines, or 3) they do not have 4 sides. Point to each item and explain why it is not a quadrilateral.

Not Quadrilaterals



○ Read to the child: Circle the quadrilaterals below.





Read to the child:
Today we are going to play four games of Four in a Row in honor of four-sided quadrilaterals. We are going to take turns drawing a quadrilateral in a square. We will each use a different color. The goal is to draw four quadrilaterals in a row vertically, horizontally, or diagonally first.

INDEPENDENT REVIEW

Draw hands on each clock to show the time given.

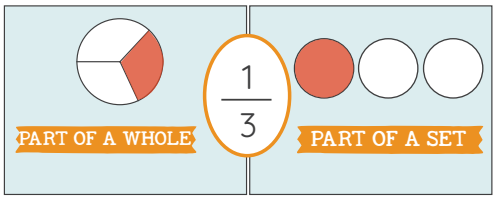

quarter after 4

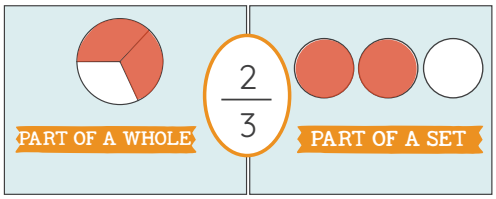

8:15


nine-thirty

Write the number of days in each month in a non-leap year. If needed, reference the poem on page 152.

Fill in the parts to represent the given fractions.





Complete the subtraction problems. Borrow and regroup if needed.

$\begin{array}{r} \cancel{5}\,\cancel{6}4 \\ -\ 28 \\ \hline 36 \end{array}$	$\begin{array}{r} 59 \\ -\ 36 \\ \hline 23 \end{array}$
$\begin{array}{r} \cancel{6}\,\cancel{7}3 \\ -\ 39 \\ \hline 34 \end{array}$	$\begin{array}{r} 88 \\ -\ 56 \\ \hline 32 \end{array}$
$\begin{array}{r} \cancel{8}\,\cancel{9}5 \\ -\ 68 \\ \hline 27 \end{array}$	$\begin{array}{r} \cancel{3}\,\cancel{4}6 \\ -\ 28 \\ \hline 18 \end{array}$

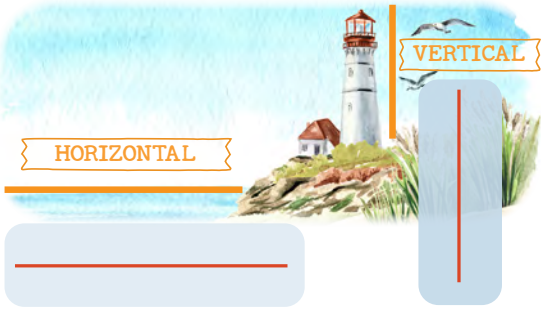
Lesson 105

VERTICAL AND HORIZONTAL LINES AND ANGLES

Money

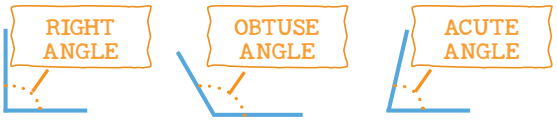
Take the bills from the math box and give the child several bills in a mixed-up pile (such as 2 $100 bills, 6 $20 bills, 4 $10 bills, 6 $5 bills, and 3 $1 bills) and have the child sort the money into like bills and count the bills. (Start with the highest value bills.) Repeat several times with different piles of bills.

Read to the child: Look at this beautiful lighthouse standing tall to warn sailors of danger. Point to the orange lines on the picture. They are running in different directions. One is ***vertical,*** and the other is ***horizontal***. A vertical line reaches up and down, and a horizontal line lies flat, similar to the horizon (the place where the sky meets the earth). Draw a vertical line in the box by the lighthouse and a horizontal line in the box beneath the horizon.



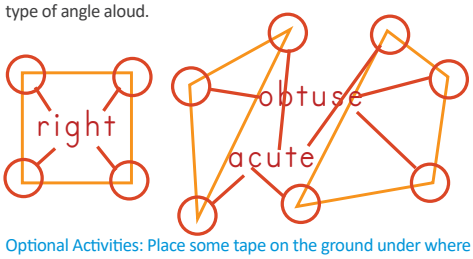
Read to the child: When two lines meet, they form a corner. The inside of the corner is called an ***angle***.

Below are three types of angles. When a horizontal and vertical line meet, they form a ***right angle***. An angle larger than a right angle is known as an ***obtuse angle***. An angle smaller than a right angle is known as an ***acute angle***.



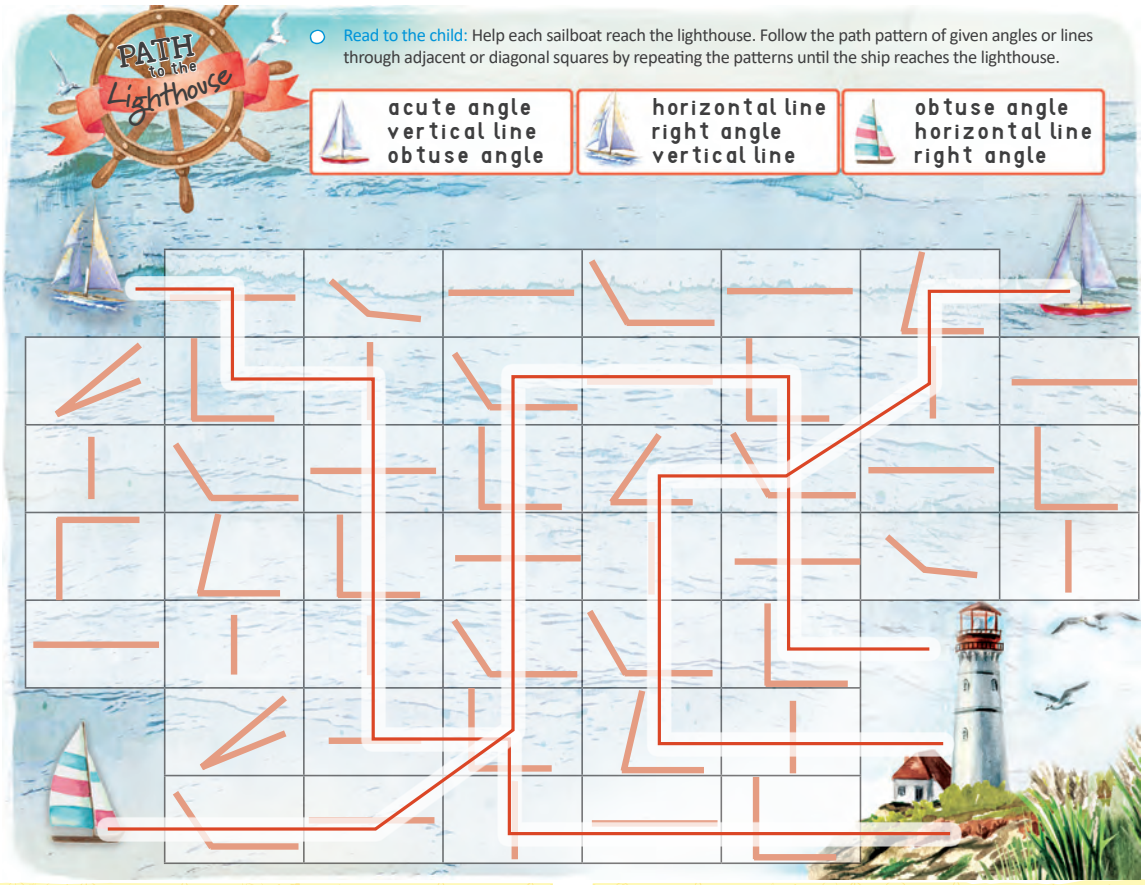
Shapes have angles inside each corner. Look at this triangle. Point to the obtuse angle. Point to the two acute angles.

Read to the child: Circle each angle in the shapes below and say the type of angle aloud.



Optional Activities: Place some tape on the ground under where a door would be when closed.

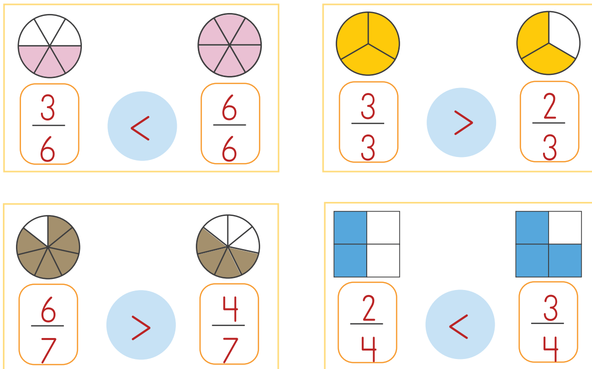
1. Open the door to different degrees and ask the child if the angle made by the door and the tape is a right, an obtuse, or an acute angle.
2. Have the child open the door to show the angle you say: right, obtuse, or acute.



Read to the child: Help each sailboat reach the lighthouse. Follow the path pattern of given angles or lines through adjacent or diagonal squares by repeating the patterns until the ship reaches the lighthouse.

INDEPENDENT REVIEW

Write a fraction to show the shaded part of each shape. Below the line write the total number of equal parts shown on each shape. Above the line write the number of parts that are shaded. Then write > or < in the circle between the fractions to show which fraction is greater.



$\frac{3}{6} < \frac{6}{6}$ $\quad$ $\frac{3}{3} > \frac{2}{3}$

$\frac{6}{7} > \frac{4}{7}$ $\quad$ $\frac{2}{4} < \frac{3}{4}$

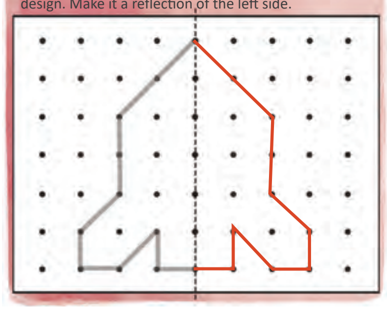
Complete the problems.

$$\begin{array}{r} 286 \\ -\,142 \\ \hline 144 \end{array} \qquad \begin{array}{r} \overset{2}{\cancel{3}}{}^{1}26 \\ -\,236 \\ \hline 90 \end{array}$$

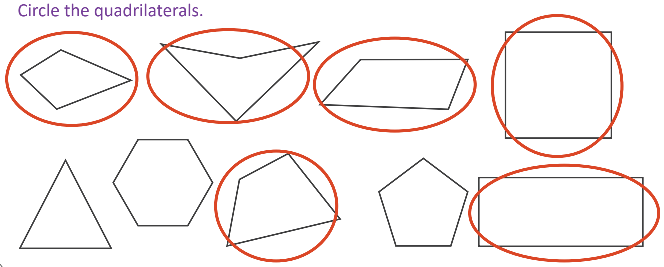
$$\begin{array}{r} 536 \\ +\,442 \\ \hline 978 \end{array} \qquad \begin{array}{r} \overset{1}{4}27 \\ +\,236 \\ \hline 663 \end{array}$$

PEG Patterns Symmetry

Use a colored pencil to complete the right side of the design. Make it a reflection of the left side.



Circle the quadrilaterals.



Lesson 106

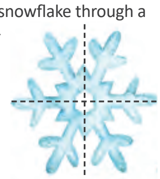
SYMMETRY

Mental Math

Have the child read each problem below and identify whether a doubles addition fact can be used to help complete the problem. Then say the answer aloud.

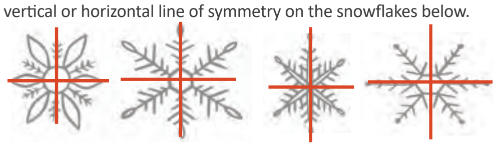
14	13	10	18	8	12
- 7	- 3	- 5	- 9	- 4	- 6
7	10	5	9	4	6

○ Read to the child: God has created a beautiful world full of wonders. Look at the snowflakes below. When you look at a snowflake through a microscope, you can see tiny crystal-like patterns—symmetrical patterns. ***Symmetry*** is when an object has the same parts on both sides of a line.

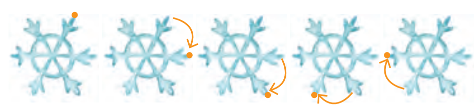


Trace the vertical dashed line on the blue snowflake. This is called a line of symmetry, also known as a dividing line between two halves that are mirror images of each other. Because both sides are exactly the same, this snowflake has ***reflectional symmetry***.

Some shapes have more than one line of symmetry. Trace the horizontal line on the blue snowflake. If you folded the snowflake vertically or horizontally on the lines, both sides would mirror each other. Draw a vertical or horizontal line of symmetry on the snowflakes below.

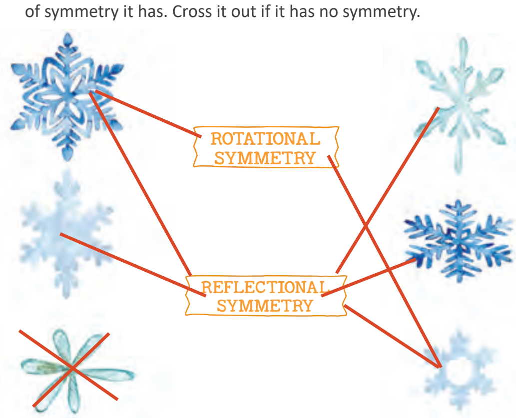


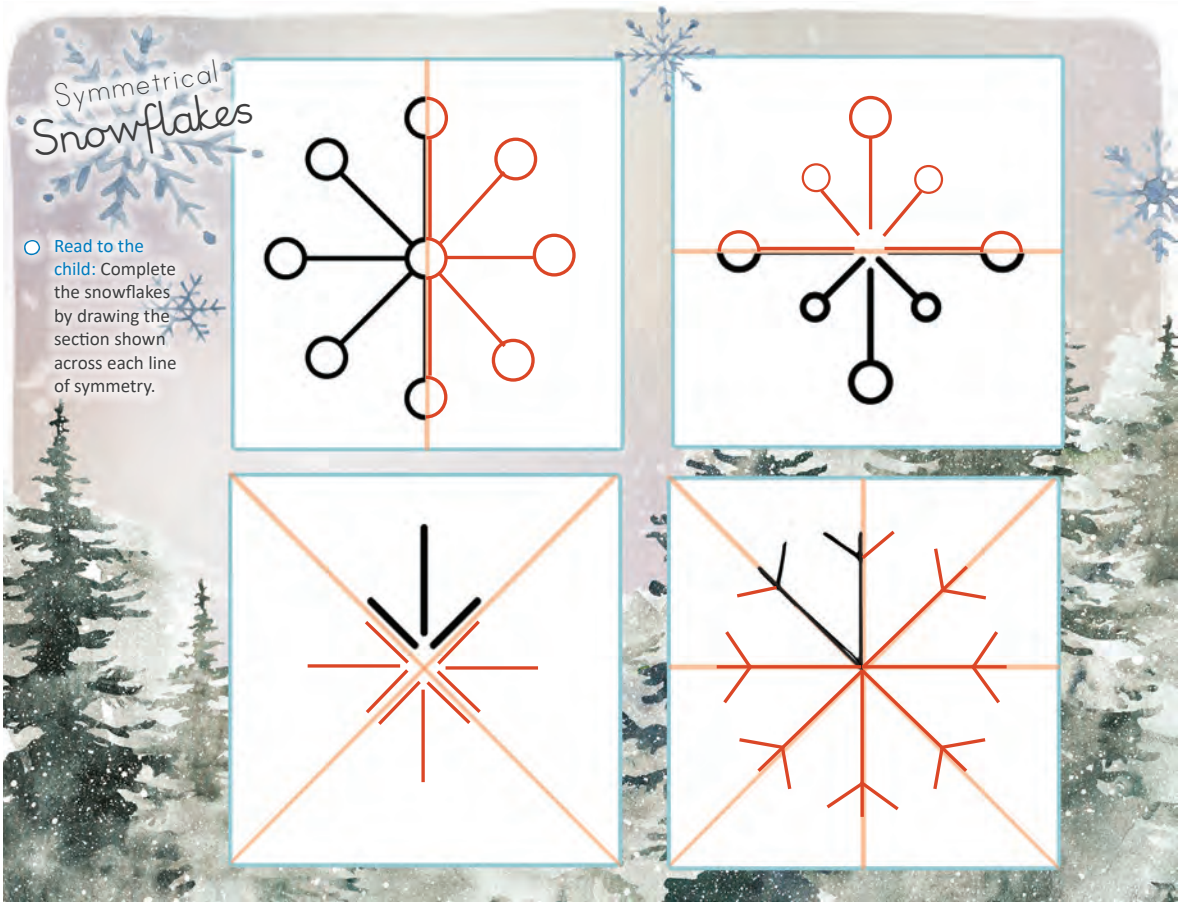
○ Read to the child: ***Rotational symmetry*** is when an image still looks the same after it has been turned less than on full turn. Notice the snowflake below has been rotated 4 times and still looks the same each time. It has rotational symmetry.



Does this shape have rotational symmetry? When it is turned a quarter turn, the shape looks exactly the same as the first square. (The blue line is to show the shape has turned.)

○ Read to the child: Draw a line from the object to the type or types of symmetry it has. Cross it out if it has no symmetry.





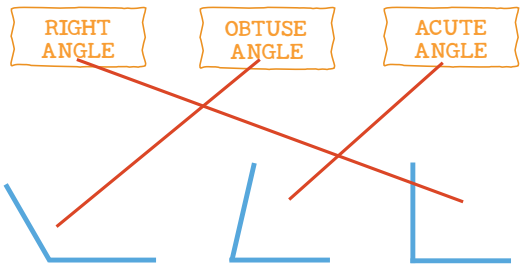
Read to the child: Complete the snowflakes by drawing the section shown across each line of symmetry.

INDEPENDENT REVIEW

Write the correct number in each box.

	10 less: 3,479	
1 less: 3,488	3,489	1 more: 3,490
	10 more: 3,499	

Draw a line from the angle to its type.



Use this calendar to fill in the boxes below.

June 2027

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

1. Write the date one month before than the date circled in green.

   May 11, 2027

2. Write the date one month after than the date circled in green.

   July 11, 2027

3. Circle the day of the week that July 1st will be.

   Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Lesson 107

DRAWING CONGRUENT LINE SEGMENTS

Mental Math

Read to the child: An easy way to add 20 to any number is to increase the digit in the tens place by 2. Mentally complete the problems and say the answers aloud.

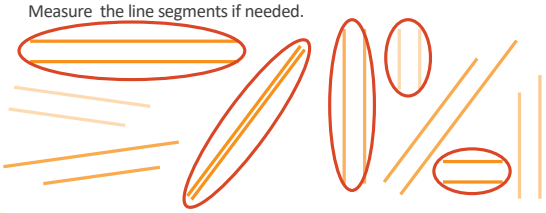
41 + 20 = 61 16 + 20 = 36 73 + 20 = 93

Extra Items
ruler

○ Read to the child: Do you remember Kayla? She has a twin sister named Kylie, and they share many characteristics. They look the same, they are the same size, and they both like to measure things. When two line segments or shapes have the exact same shape and size, they are called congruent. Measure each of the line segments below. Are they the same length? [Yes]

CONGRUENT

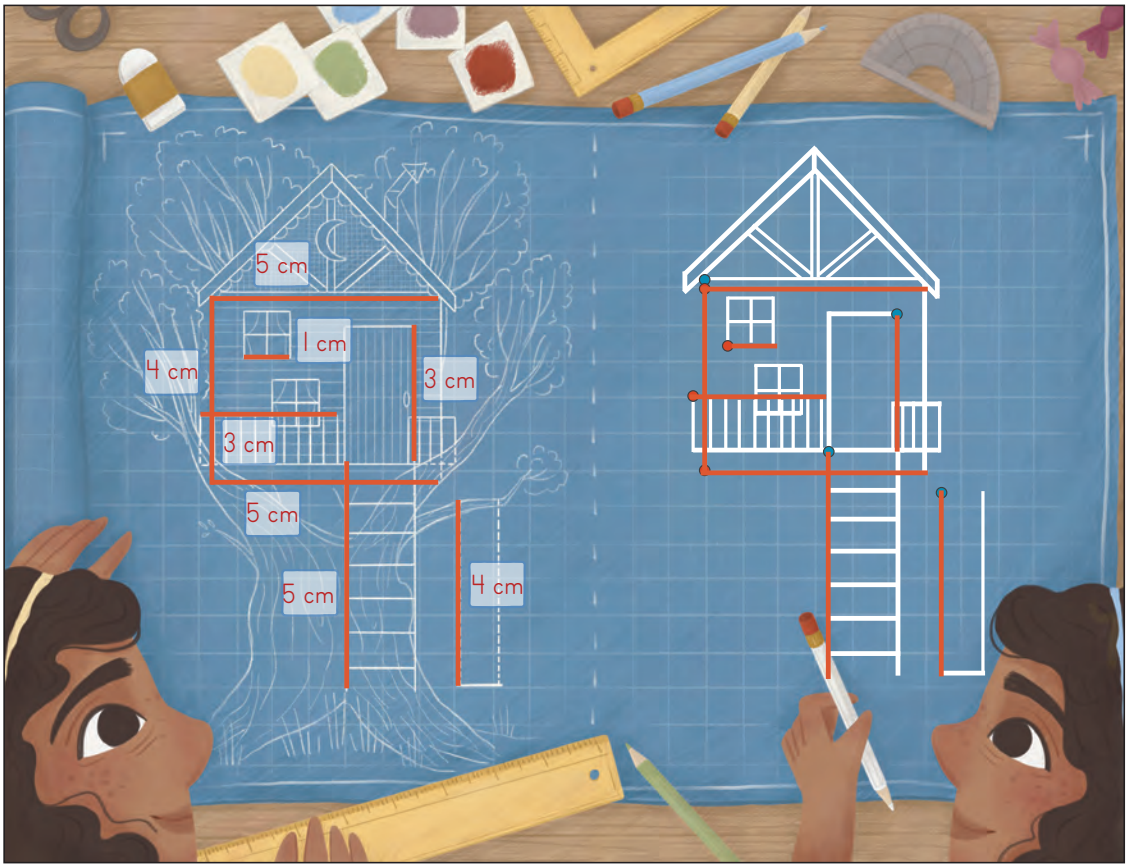
○ Read to the child: Circle the pairs of line segments that are congruent. Measure the line segments if needed.



○ Read to the child: Draw a congruent line segment next to each line segment using your ruler.

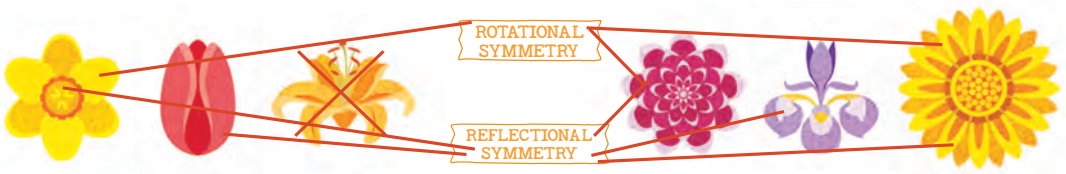
○ **Measure to Match Activity**. Read to the child: Kayla has found a plan for a tree house. Kylie wants to copy the plan for herself. She has started but has a few lines left. Measure the red line segments in centimeters on Kayla's plan that are missing on Kylie's plan and write the number of centimeters in each box. Then follow the instructions below to re-create the line segments on Kylie's plan. Be sure all the line segments you create are congruent to the line segments on Kayla's plan.

1. Find a blue dot. Draw a vertical line segment under this blue dot to match the length of the original line segment in the same position. Continue with the other blue dots.
2. Find a red dot. Draw a horizontal line segment to the right of this red dot to match the length of the original line segment in the same position. Continue with the other red dots.
3. These line segments have created many angles. Can you find one of each type of angle: right, obtuse, and acute? If needed, help the child with the acute angles and obtuse angles, which can be found in the roof.



INDEPENDENT REVIEW

Draw a line from the object to the type of symmetry it has. Cross it out if it has no symmetry.



Find and circle the number word for each number.

Number Words
Word Search

8, 10, 15, 16, 18

f	i	f	t	e	e	n	t
i	f	r	w	t	i	i	y
e	i	s	e	v	g	n	i
t	f	x	l	c	h	c	s
e	l	e	v	e	t	e	n
e	i	g	h	t	e	e	n
n	e	v	e	l	m	d	e
s	i	x	t	e	e	n	n

Complete the problems. Then round the sums (answers) to the nearest 10 and write them in the purple boxes.

Tens	Ones
4	5
+ 3	9
8	4

Rounded Sum: 80

Tens	Ones
6	4
+ 2	8
9	2

Rounded Sum: 90

Lesson 108

CONGRUENT AND SIMILAR SHAPES

Skip Counting

Have the child skip count by 4s from 4 to 28 once or twice. If needed, have the child use the chart.

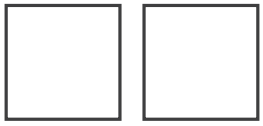
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Mental Math

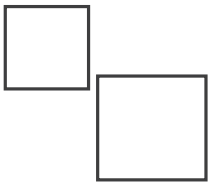
Have the child subtract 100 from each number.

432 - 100	3,102 - 100	1,000 - 100
332	3,002	900

○ Read to the child: Just like line segments, shapes can be ***congruent***, which means they are the exact same shape and size. ***Similar shapes*** have the same shape but not necessarily the same size. The squares on the left are congruent and similar, and the squares on the right are only similar.

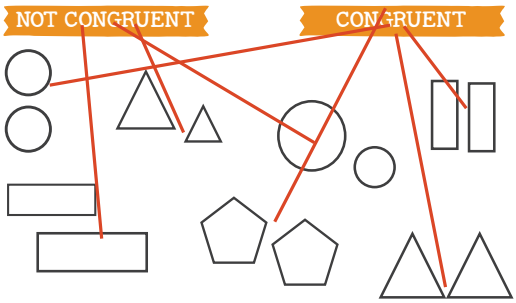


Same Shape, Same Size

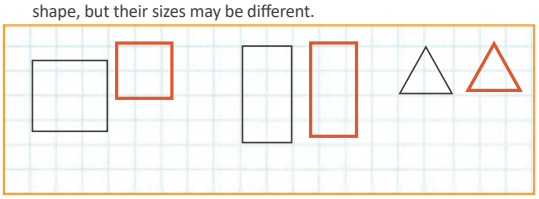


Same Shape, Different Size

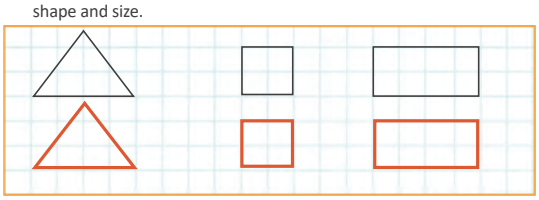
○ Read to the child: Draw lines from the pairs of shapes to the correct labels. Congruent shapes have the same shape and size. Shapes that are the same but are different sizes are not congruent.



○ Read to the child: Using the grids as guides, draw shapes that are similar to the shapes given. Similar shapes always have the same shape, but their sizes may be different.

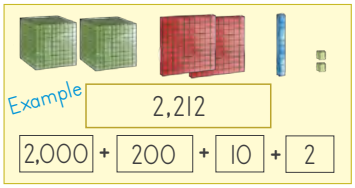


○ Read to the child: Using the grids as guides, draw shapes that are congruent to the shapes given. Congruent shapes have the same shape and size.



INDEPENDENT REVIEW

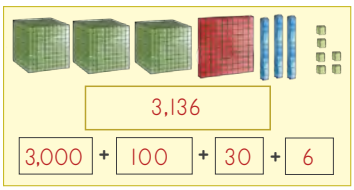
Write the standard form and expanded form for each set of base-10 items.



Example

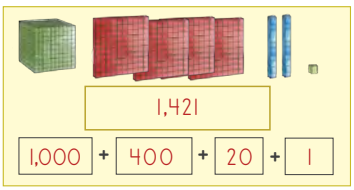
2,212

2,000 + 200 + 10 + 2



3,136

3,000 + 100 + 30 + 6



1,421

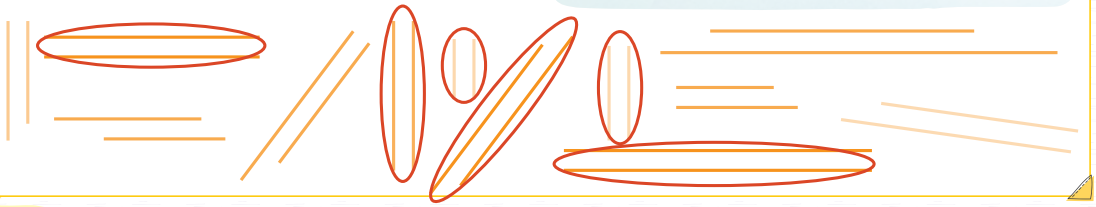
1,000 + 400 + 20 + 1

Write the number of days in each month. If needed, reference the poem on page 152.

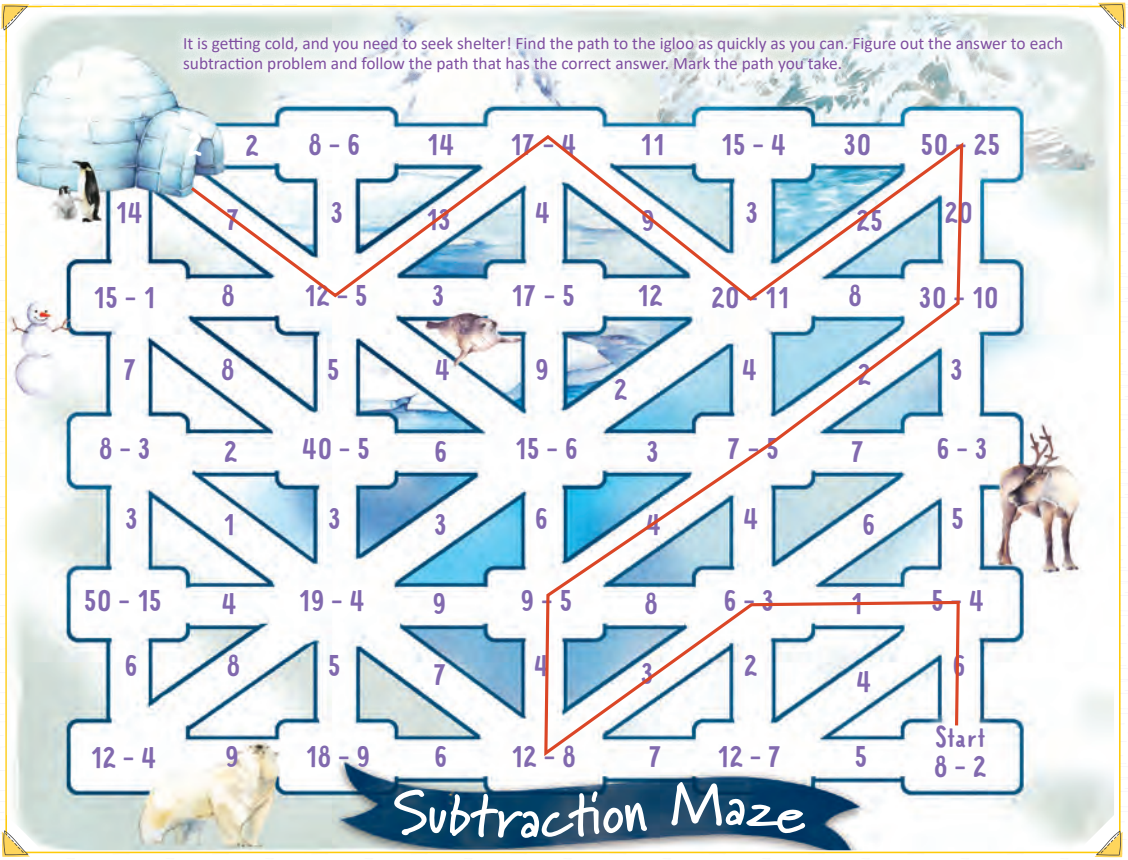
Fill in the circle that shows the most reasonable weight of each item.

1 pound = 16 ounces | 1 ton = 2,000 pounds

Circle the pairs of line segments that are congruent.



It is getting cold, and you need to seek shelter! Find the path to the igloo as quickly as you can. Figure out the answer to each subtraction problem and follow the path that has the correct answer. Mark the path you take.



Lesson 109

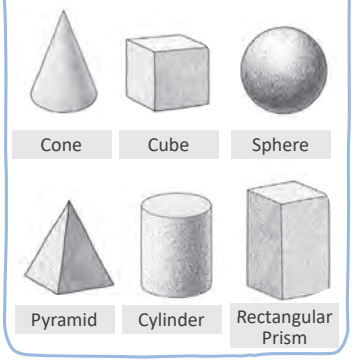
GEOMETRIC SOLIDS

Money

Take the bills from the math box and give the child several bills in a mixed-up pile (such as 2 $100 bills, 6 $20 bills, 4 $10 bills, 6 $5 bills, and 3 $1 bills). Have the child sort the money into like bills and count the bills. (Start with the highest value bills.) Repeat with different piles of bills several times.

Read to the child: ***Three-dimensional*** shapes are shapes that are solid and not flat. We often refer to them as 3D shapes. The shapes below are examples of three-dimensional shapes. Point to each shape and say its name.

Some Examples of 3D Shapes



A two-dimensional, flat shape, such as a square, is often defined by the number of sides or lines making up the shape. A face is a flat surface on a solid. A square pyramid has four triangular faces and one square face on the bottom. How many faces does a cube have? [6] How many faces does a cylinder have? [2] A cone only has one face—the circle at the bottom. A sphere does not have any faces.

Read to the child: Find and point to the following shapes on the sandcastle below.

Cone Pyramid Cylinder Cube Rectangular Prism

Answers will vary.

Read to the child: Find the hidden geometric shapes in the picture on the next page. Write the grid coordinates for their locations (for example, A4).

CONE D6 PYRAMID A3

CUBE E3 CYLINDER E6

SPHERE B1 RECTANGULAR PRISM A8

"Wine Country Landscape" by Walt Curlee, 2015

INDEPENDENT REVIEW

Write the addition problem and multiplication problem shown by each array.

Addition Problem: 4 + 4 + 4 = 12

Multiplication Problem: 3 × 4 = 12

× × × ×
× × × ×
× × × ×

Addition Problem: 9 + 9 + 9 = 27

Multiplication Problem: 3 × 9 = 27

× × × × × × × × ×
× × × × × × × × ×
× × × × × × × × ×

With Xs, show an array that represents the addition and multiplication problems.

Addition Problem: 5 + 5 + 5

Multiplication Problem: 3 × 5

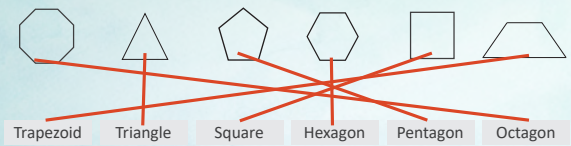
XXXXX
XXXXX
XXXXX

INDEPENDENT REVIEW

Complete the subtraction problems.

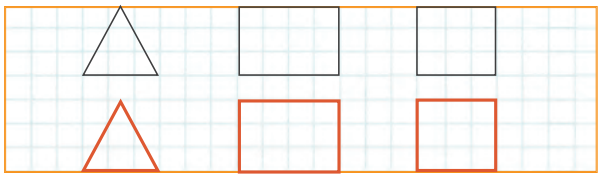
$\cancel{5}\,\cancel{6}1 - 28 = 33$	$\cancel{6}\,\cancel{7}4 - 59 = 15$	$\cancel{7}\,\cancel{8}2 - 49 = 33$

Draw a line from each shape to its name. (Hints: "Octa-" means 8. "Hexa-" means 6. "Penta-" means 5.)



Trapezoid Triangle Square Hexagon Pentagon Octagon

Draw shapes that are congruent to the shapes given by using the grid as a guide.

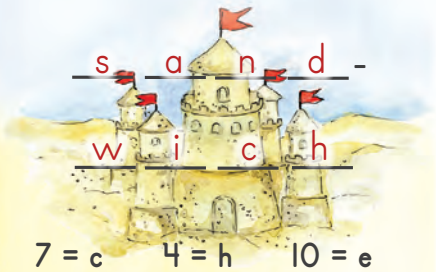


Complete the Riddle

Complete each addition problem. Then use the key to answer the riddle.

What food do you find at the beach?

31	17	32	17
26	24	21	12
+ 25	+ 52	+ 12	+ 45
82	93	65	74



7 = c	4 = h	10 = e
9 = n	3 = d	6 = w
8 = s	5 = i	2 = a

Lesson 110

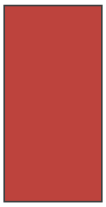
CONSTRUCTING AND DECONSTRUCTING GEOMETRIC SHAPES

Spelling Numbers

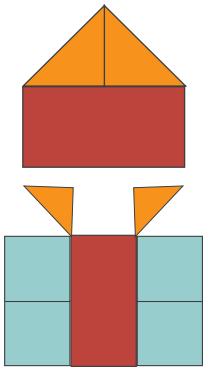
Have the child write "twelve," "sixteen," "seventeen," and "eighteen" on the whiteboard.

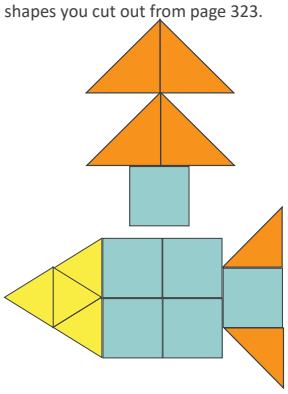
Extra Item
scissors

○ Have the child cut out the shapes at the end of this lesson prior to beginning the lesson. Read to the child: Take a red rectangle that you cut out. How many of the blue squares do you think will fit into this rectangle without gaps or overlapping at all? Place the blue squares over the rectangle. These two squares make one red rectangle.



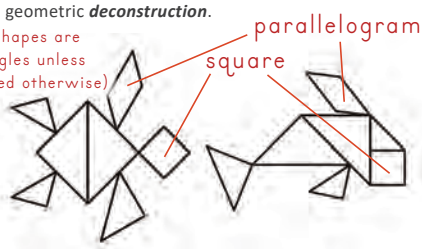
When we use two or more shapes to make a new shape, it is a form of geometric ***construction.*** Look at the images below. Construct a copy of each using the shapes you cut out from page 323.



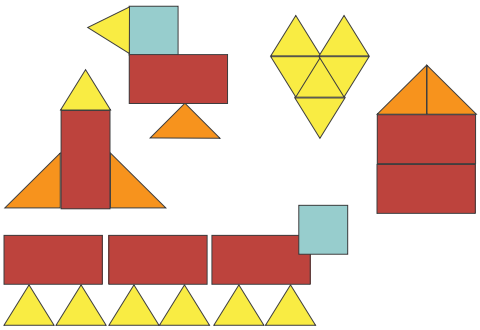


○ Read to the child: Name the shapes used to create the constructed shapes below. When you determine the individual shapes of a constructed shape, it is a form of geometric ***deconstruction***.

(All shapes are triangles unless labeled otherwise)



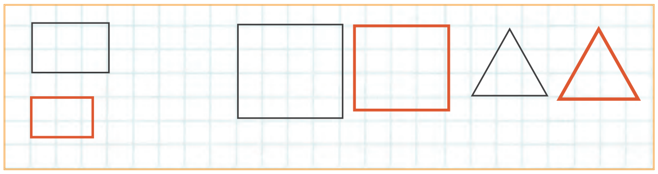
○ Read to the child: We are going to race to create the pictures below. The first person to create each picture draws an X in the scoreboard below. The first person to have three Xs wins.



Child	Teacher
☐ ☐ ☐	☐ ☐ ☐

INDEPENDENT REVIEW

Draw shapes that are similar to the shapes given by using the grid as a guide.



Write the addition problem and multiplication problem shown by each array.

Addition Problem:	8 + 8 = 16
Multiplication Problem:	2 × 8 = 16
O O O O O O O O O O O O O O O O	

Addition Problem:	6 + 6 = 12
Multiplication Problem:	2 × 6 = 12
× × × × × × × × × × × ×	

Complete the problems.

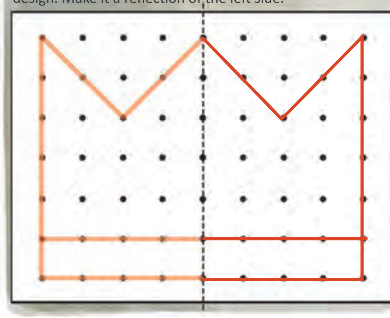
Hundreds	Tens	Ones
	1	
4	2	7
+1	3	4
5	6	1

Hundreds	Tens	Ones
1	1	
5	9	8
+1	3	6
7	3	4

Hundreds	Tens	Ones
1	1	
4	8	9
+2	4	3
7	3	2

PEG Patterns — Symmetry

Use a colored pencil to complete the right side of the design. Make it a reflection of the left side.



Draw hands on each clock to show the time given.

quarter after 6 | 6:25 | eleven-thirty

Lesson 111

IDENTIFYING TRANSFORMATIONS

Skip Counting

Have the child skip count by 3s from 3 to 30 once or twice. If needed, have the child use the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

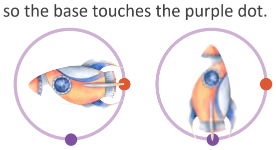
Mental Math

Have the child answer the problems aloud.

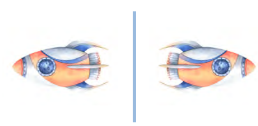
600 - 100	2,200 + 100	4,300 - 100	6,600 + 1,000
500	2,300	4,200	7,600

○ Take the rocket from the math box. Remove the stand if it's attached. Read to the child: Place your rocket on the blue box. Without turning it, slide it over to the green box.

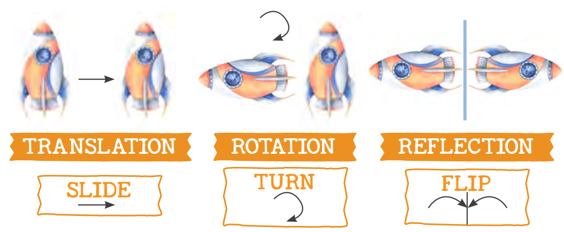
Place your rocket on the circle so the base of the rocket touches the small red dot. Now turn the rocket so the base touches the purple dot.



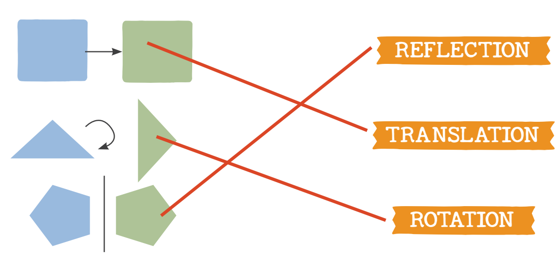
Place your rocket to the left of the line with the base touching the line. Then leave the base on the line and flip the rocket over the line.

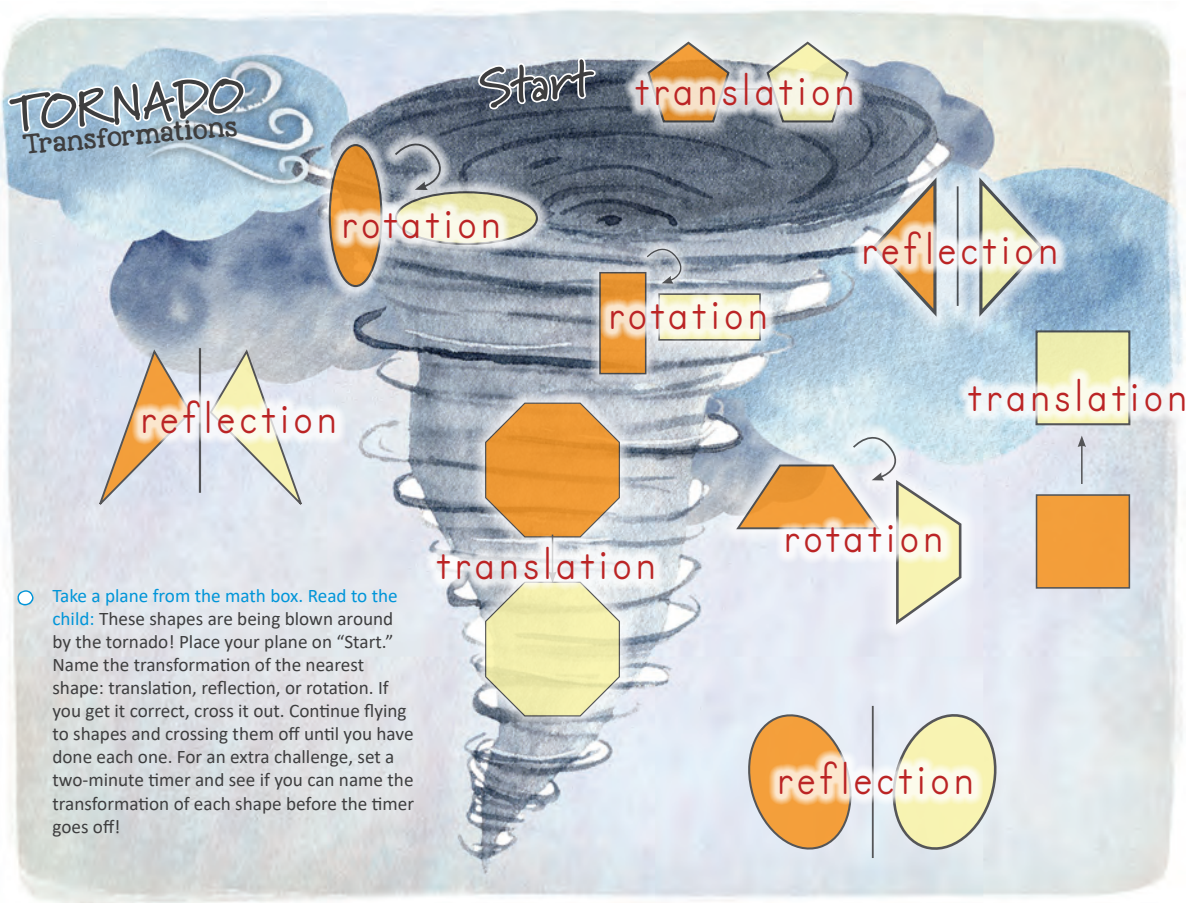


○ Read to the child: The changes you made to the position of your rocket are known as geometric transformations. We will cover three different transformations in this lesson. The rockets below are showing the changes you made. Point to each one and say the name of the transformation aloud.



○ Read to the child: Draw a line from each example to the type of transformation it shows.





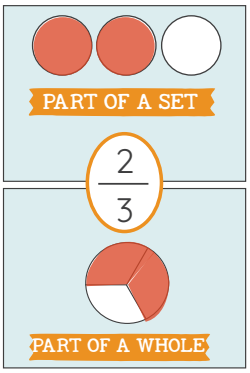
Take a plane from the math box. Read to the child: These shapes are being blown around by the tornado! Place your plane on "Start." Name the transformation of the nearest shape: translation, reflection, or rotation. If you get it correct, cross it out. Continue flying to shapes and crossing them off until you have done each one. For an extra challenge, set a two-minute timer and see if you can name the transformation of each shape before the timer goes off!

INDEPENDENT REVIEW

Write the correct time in the blue box if you start at 6 PM.

1 HALF HOUR AGO	5:30 PM
2 HOURS FROM NOW	8:00PM
1 HOUR AGO	5:00 PM
1 HOUR FROM NOW	7:00 PM
3 HOURS FROM NOW	9:00 PM

Fill in the parts to represent the given fraction.

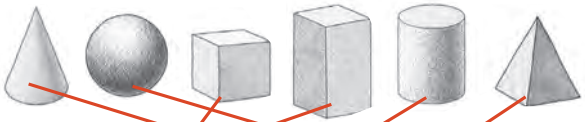


Write the addition problem and multiplication problem shown by each array.

Addition Problem: 10 + 10 = 20
Multiplication Problem: 2 × 10 = 20

Addition Problem: 5 + 5 = 10
Multiplication Problem: 2 × 5 = 10

Draw a line from each 3D shape to its name.



Rectangular Prism | Cube | Cylinder | Pyramid | Cone | Sphere

Complete the addition problems.

8 + 4 + 9 = 21

7 + 11 + 13 = 31

65	26	97
35	38	72
+ 51	+ 45	+ 38
151	109	207

Lesson 112

PERIMETER

Time

Have the child set the following times on the clock from the math box:

quarter to 3 | 4:28 | quarter after 7 | quarter to 7 | 5:53

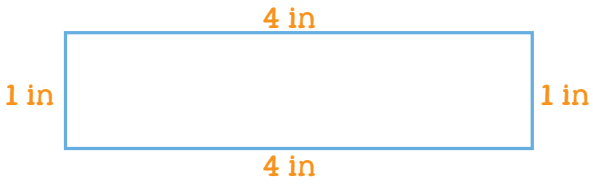
Mental Math & Skip Counting

Read to the child: An easy way to add 9 to any number is to first add 10 and then subtract 1. Mentally complete the problems in purple. Say the answers aloud.

18 + 9 = 27 | 35 + 9 = 44 | 29 + 9 = 38 | 36 + 9 = 45 | 17 + 9 = 26

- Have the child count backward by 50s from 1,000 to 700.
- Have the child count by 5s from 900 to 1,000.

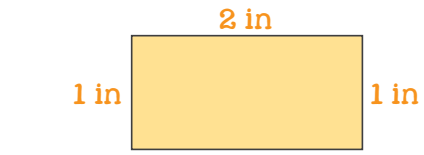
○ Read to the child: Look at the dinosaur dig site on the next page. Each dinosaur discovered is roped off. The paleontologists need to know the total length of rope to use around each site. They need to know the ***perimeter***, which is the distance around a 2D shape. What does perimeter mean? [the distance around a 2D shape] To find the perimeter of an object, we need to add the lengths of every side. Look at the rectangle below. The two longer sides are each 4 inches long. The shorter sides are each 1 inch long.



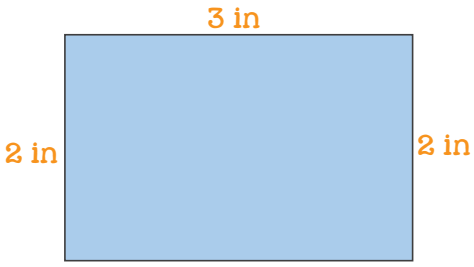
To find the perimeter, we need to add together the lengths of every side. Point to each number in the equation below, and then point to the side it represents on the rectangle in the previous column. The rectangle has a perimeter of 10 inches.

4 in + 1 in + 4 in + 1 in = 10 in

○ Read to the child: For each shape below, write the lengths of every side in the blue boxes. Then write the total in the orange box.



1 + 1 + 2 + 2 = 6 in



2 + 2 + 3 + 3 = 10 in

○ Read to the child: Write the number of roped-off sections on each side in the blue boxes. Then write the total in the orange box.

2 + 2 + 3 + 3 = 10

3 + 3 + 5 + 5 = 16

4 + 4 + 7 + 7 = 22

3 + 3 + 6 + 6 = 18

2 + 2 + 4 + 4 = 12

INDEPENDENT REVIEW

Write the number words.

16 sixteen

17 seventeen

18 eighteen

19 nineteen

In each circle write a greater than, less than, or equal sign.

12 + 4 = 11 + 5

IIII IIII IIII IIII > IIII IIII IIII

Write the number of days each month has.

September 30 June 30 November 30

Complete the addition problems.

43	37
32	39
+ 71	+ 42
146	118

10 + 3 + 9 = 22

8 + 14 + 5 = 27

For each amount of cents shown, circle the coins you would use to equal the amount. Use the fewest number of coins. (Hint: Circle the highest value coins you can use first.)

56¢

89¢

Draw a line from each example to the type of transformation it shows.

ROTATION

TRANSLATION

REFLECTION

Lesson 113

IDENTIFYING TRIANGLES

Time

Have the child set the following times on the clock from the math box:

quarter to 5 | 6:13 | quarter after 9 | quarter to 9 | 2:55

Mental Math & Skip Counting

Read to the child: An easy way to add 9 to any number is to first add 10 and then subtract 1. Mentally complete the problems in purple. Say the answers aloud.

32 + 9	66 + 9	19 + 9	45 + 9	11 + 9
41	75	28	54	20

- Have the child count by 5s from 900 to 1,000.

○ Read to the child: There are six different types of triangles, and they can be easily identified by either side lengths or angle measures. Look at the types of angles below. If we draw a third line to make the lines into a triangle, we create three of our six types of triangles. An obtuse triangle contains one obtuse angle. An acute triangle contains three acute angles. A right triangle contains one right angle. Circle these angles in the triangles below.

OBTUSE ANGLE ACUTE ANGLE RIGHT ANGLE

OBTUSE TRIANGLE ACUTE TRIANGLE RIGHT TRIANGLE

○ Read to the child: The remaining three triangles are identified by the number of congruent sides they have. Remember that congruent line segments have the same length. An ***equilateral triangle*** has three congruent sides. An ***isosceles*** [eye–SAW–suh–leez] ***triangle*** has two congruent sides. A ***scalene*** [SCAY–leen] ***triangle*** has no congruent sides. Trace the congruent sides below.

EQUILATERAL TRIANGLE ISOSCELES TRIANGLE SCALENE TRIANGLE

○ Read to the child: For each triangle, circle the type of triangle that best describes it based on its sides and angles.

EQUILATERAL TRIANGLE RIGHT TRIANGLE ACUTE TRIANGLE

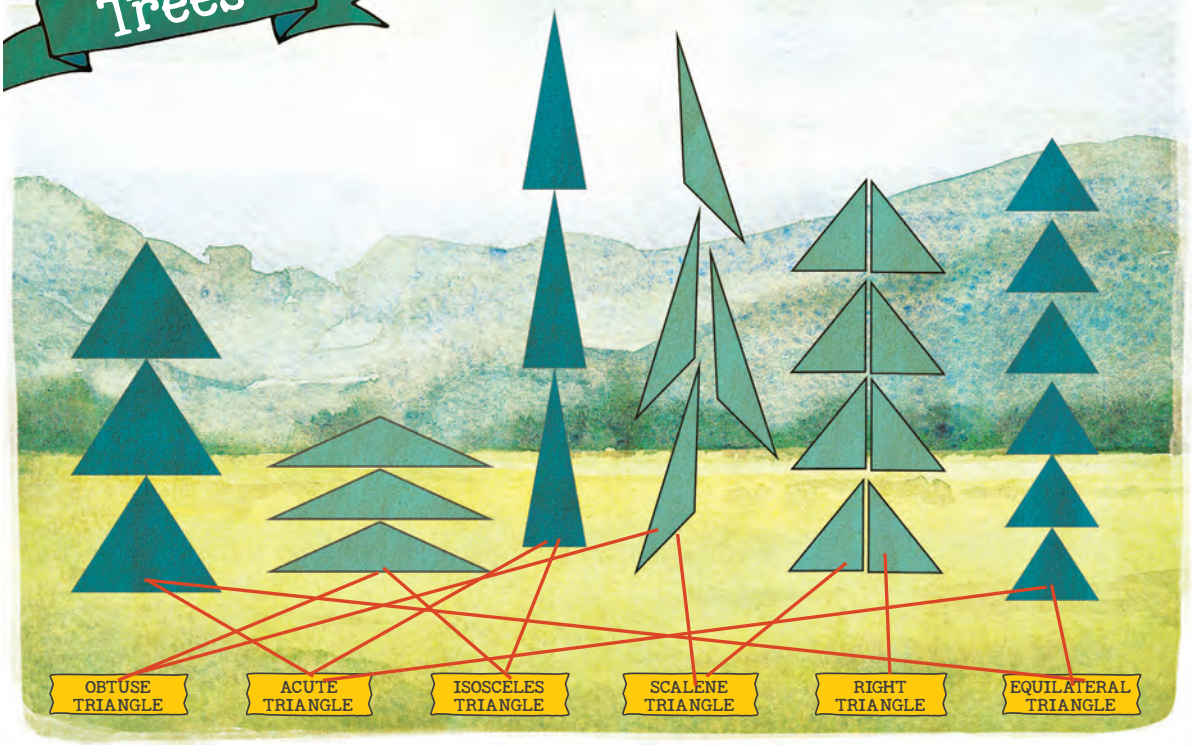
OBTUSE TRIANGLE ACUTE TRIANGLE EQUILATERAL TRIANGLE

ACUTE TRIANGLE ISOSCELES TRIANGLE SCALENE TRIANGLE

SCALENE TRIANGLE RIGHT TRIANGLE EQUILATERAL TRIANGLE

Triangle Trees

Read to the child: Looking at the angles and side lengths, determine if each tree is made with triangles that are acute, obtuse, right, equilateral, isosceles, and/or scalene. Triangles can be both acute and equilateral if all the sides are equal and all the angles are acute. Triangles can be both scalene and obtuse if all the sides are different lengths and one of the angles is obtuse, etc. Draw a line to one or more types of triangles from each tree. Optional Challenge: Have the child create three different trees on a scratch paper using three different types of triangles.



INDEPENDENT REVIEW

Complete the subtraction problems. Don't forget the dollar sign and decimal point in your answer.

$4.35 − $2.25 = $2.10	$6.84 − $1.52 = $5.32	$7.43 − $5.21 = $2.22
$5.78 − $3.25 = $2.53	$9.45 − $6.32 = $3.13	$8.36 − $7.25 = $1.11

Complete the problems. Before adding each column, if there are two digits that together equal 10, connect them with a curved line and add them first if desired.

87 + 34 + 23 = 144	11 + 99 + 44 = 154	35 + 72 + 65 = 172

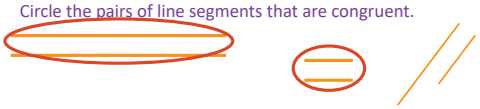
Write the correct number in each box.

	10 less: 3,479	
1 less: 3,488	3,489	1 more: 3,490
	10 more: 3,499	

With Xs, show an array that represents the addition and multiplication problems.

Addition Problem: 2 + 2 + 2
Multiplication Problem: 3 × 2
XX XX XX

Circle the pairs of line segments that are congruent.



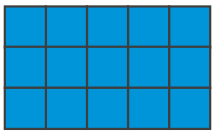
Lesson 114

AREA: PART 1

Spelling Numbers

Have the child write "twelve," "sixteen," "seventeen," and "eighteen" on the whiteboard.

○ Read to the child: When we measure the perimeter of something, we measure the total length of the sides around the outside edges. This is helpful when, for example, we want to build a fence *around* a yard. But how do we know how much grass we would need to put *inside* the fence? We need to calculate the area. The space inside a 2D shape is called the ***area***. Look at the blue rectangle below on the left. To figure out how much space is inside the rectangle, we can cover it with squares as shown in the rectangle on the right and count them. Each square is called a ***square unit***.



Count the individual square units in the blue rectangle.

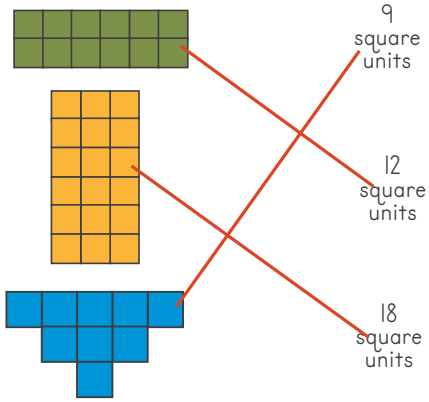
The area of the rectangle is 15 square units. Finding the area means you are finding the number of square units needed to cover the 2D shape. Write the number of square units the green and orange shapes have.

8 square units

6 square units

The space inside a 2D shape is called the area.

○ Read to the child: Draw a line from each shape to its area.



○ **Aquarium Areas Activity**. Read to the child: Count the square units on each fish tank on the next page to find the area. Match the area to the letter below to answer the riddle.

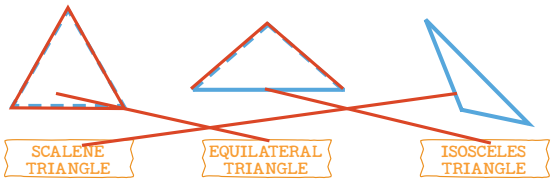
What is the most musical part of a fish? Its . . .

s	c	a	l	e	s
①	②	③	④	⑤	⑥

12 = c 8 = e 15 = l
16 = s 10 = a 6 = w

INDEPENDENT REVIEW

Trace the congruent sides of the triangles, and then draw a line to the correct type.



Complete the subtraction problems. Don't forget the dollar sign and decimal point in your answer.

$5.65	$7.88	$8.46
- $2.15	- $3.52	- $4.25
$3.50	$4.36	$4.21

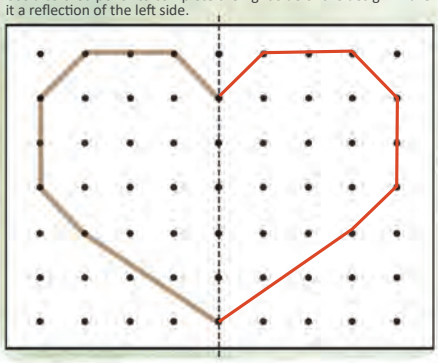
Write the number words.

12	14
twelve	fourteen
13	15
thirteen	fifteen

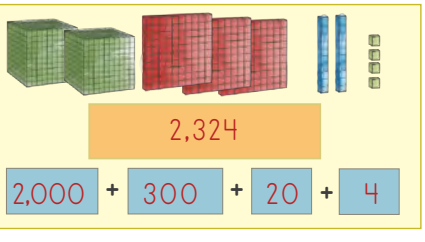
PEG Patterns

Symmetry

Use a colored pencil to complete the right side of the design. Make it a reflection of the left side.



Write the standard form and expanded form for the set of base-10 items.



2,324

2,000 + 300 + 20 + 4

Lesson 115

AREA: PART 2

Extra Item: plain or grid paper

Skip Counting

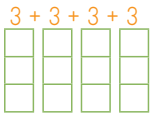
Have the child skip count backward by 3s from 21 to 3.

Fractions

Play the "Fraction Dice Game." (Instructions are on page 145.)

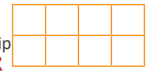
○ Read to the child: You learned from the last lesson that area is the space inside a 2D shape. Find the area of this rectangle by counting the square units. [12]

Counting each square unit is one way to find area, but there is a quicker way. The square units below show the columns (vertical stacks of square units) of the rectangle above pulled apart. We can now easily see that each of the four columns has three boxes. Skip count by threes to find the area.



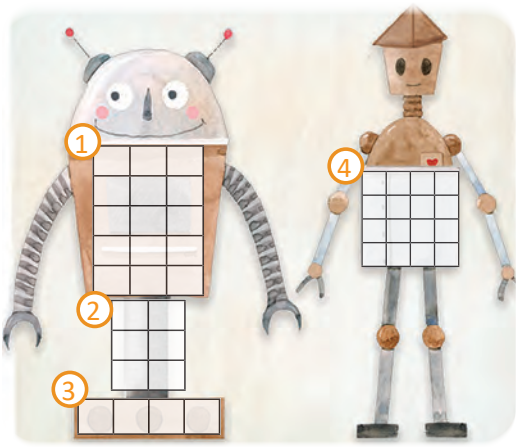
How many times did you add 3 together? Yes, 4 times. You added 3s (for the number in each column) four times (for the number of columns).

Look at the orange rectangle. How many square units are in each column? [2] How many columns are there? [4] Skip count by 2s four times to find the area of this rectangle. 8

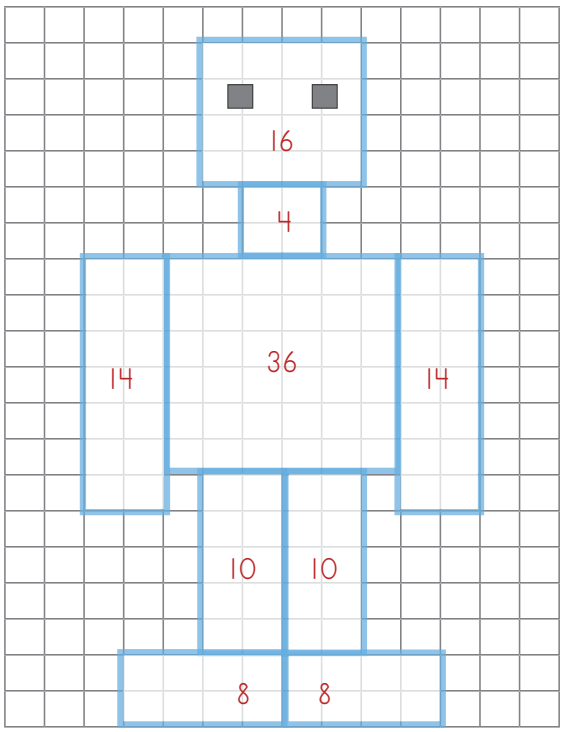


○ Read to the child: We are going to skip count to find the area of the rectangles on the robots. The number of blue boxes represents the number of columns. Write the number of square units in each column in each blue box, and then skip count to find the answer. Write it in the orange box.

1. 5 + 5 + 5 = 15
2. 3 + 3 = 6
3. 1 + 1 + 1 + 1 = 4
4. 4 + 4 + 4 + 4 = 16



○ Read to the child: Find the area of each blue shape on the robot by using the same steps as before. On scratch paper, write the number of square units in each column and skip count by the number of columns.



○ **Optional Activity.** Using grid or plain paper, have the child create his or her own robot and find the area of each square or rectangle on the robot.

INDEPENDENT REVIEW

Fill in the circle that shows the most reasonable weight of each item.

1 ounce is about the weight of a pencil.
1 pound = 16 ounces | 1 ton = 2,000 pounds

Flower
- ○ 3 tons
- ○ 8 pounds
- ● less than one ounce

Passenger Airplane
- ○ 15 ounces
- ○ 40 pounds
- ● 350 tons

Camera
- ○ 1 ton
- ○ 60 pounds
- ● 14 ounces

Backpack with Books
- ● 5 pounds
- ○ 150 tons
- ○ 20 ounces

Fill in the circle that shows the most reasonable weight of each item.

1 gram is about the weight of a paper clip.
1 kilogram = 1,000 grams (about the weight of a pineapple)

Chair
- ○ 2 kilograms
- ○ 3 grams
- ● 50 kilograms

Bottle of Glue
- ○ 50 kilograms
- ○ 100 kilograms
- ● 110 grams

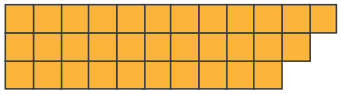
Truck
- ● 2,700 kilograms
- ○ 17 kilograms
- ○ 6 grams

Leaf
- ● 1 gram
- ○ 1½ kilograms
- ○ 40 grams

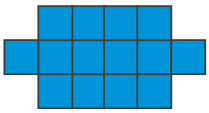
INDEPENDENT REVIEW

Count the square units to find the area. Write the answer in the box.

24 square units

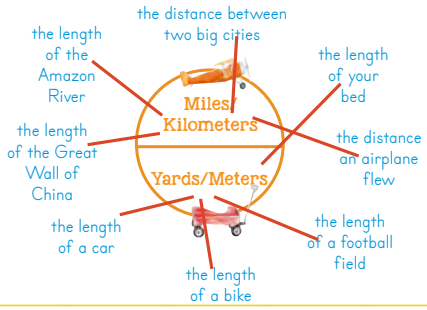


33 square units



14 square units

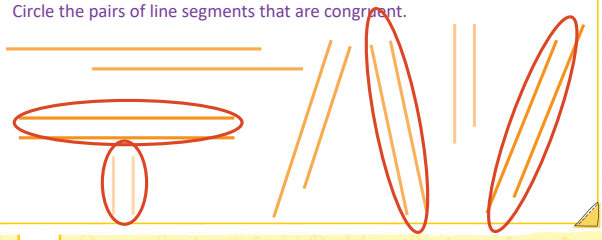
Draw a line from each blue item below to the unit you would most likely use. It takes about 20 minutes to walk a mile, and a meter is about as long as a wagon.



The gold text shows when a hot-air balloon flight started. The blue text shows how long the flight lasted. Write the time the flight ended in the blue box. Include AM or PM.

8:00 AM	30 minutes	8:30 AM
9:30 AM	1 hour	10:30 AM
1:00 PM	1 hour 30 minutes	2:30 PM
4:30 PM	2 hours	6:30 PM

Circle the pairs of line segments that are congruent.



Lesson 116

SUBTRACTION: MAKING CHANGE

Writing Numbers & Expanded Form

- Have the child write "6,516" and "8,453" on the whiteboard.
- Have the child write the expanded form for 7,367.

○ Take these items from the math box: 1 $20 bill, 2 $10 bills, 2 $5 bills, 5 $1 bills, 4 quarters, 2 dimes, 2 nickels, and 5 pennies. Give the child 1 $5 bill, 4 $1 bills, and 4 quarters. Read to the child: You want to buy something that is $4.50. I will be the store owner, and you give me your $5 bill. The cost of the item is less than the money you gave me, so I need to give you back ***change***, the difference between these two amounts. To find change, we first start with the amount of money given, $5, shown in green to the right. Then we subtract the cost of the item, $4.50, shown in red. I will keep the cost of the item, $4.50, and give you the change: $0.50.

$5.00 AMOUNT GIVEN
− $4.50 COST
$0.50 DIFFERENCE OR CHANGE

Write and then complete the subtraction problems like the example above, given the information below. Remember to line up the decimal points. If desired, use the bills and coins.

AMOUNT GIVEN: $7.50	AMOUNT GIVEN: $4.25	AMOUNT GIVEN: $8.25
COST: $5.00	COST: $3.00	COST: $5.00
$7.50	$4.25	$8.25
− $5.00	− $3.00	− $5.00
$2.50	$1.25	$3.25

○ **Making Change at the Market Activity**. Read to the child: Josh loves to help his grandfather at his farmers market booth on Saturdays. His grandfather has put Josh in charge of making change for the customers' purchases. Complete the following story problems using the same steps you just practiced. Find the amount given by the customer and write that on top. Find the cost of the items and write that on the bottom. Complete the subtraction problem. Then we will role-play the transaction using money from the math box, and you will give me my change! While the child writes the problem, gather the bills and coins specified on the next page.

$15.95
- $12.73
$3.22

Read to the child: A customer comes to the booth and gives Josh a 10-dollar bill, a 5-dollar bill, and 95 cents. He gets broccoli, honey, tomatoes, and squash for a total cost of 12 dollars and 73 cents. How much change does Josh need to give him back?

1 $10 | 1 $5
5 $1 | 3 quarters
2 dimes | 5 pennies

Read to the child: A mother comes to the booth and buys veggies for her family. The total cost for her tomatoes, lettuce, and squash is 8 dollars and 42 cents. She gives Josh 9 dollars and 75 cents. How much does Josh need to give her back?

$9.75
- $ 8.42
$1.33

2 $5 | 5 $1
3 quarters
2 nickels | 5 pennies

$20.99
- $ 7.89
$13.10

Read to the child: A young couple comes to the booth and buys lettuce and pumpkins. Their total cost is 7 dollars and 89 cents. They give Josh a 20-dollar bill and 99 cents. How much change does Josh need to give them back?

1 $20 | 2 $10
5 $1 | 3 quarters
2 dimes | 5 pennies

Read to the child: Josh is very excited because the final customer of the day wants to buy a lot of the produce they have left. Her total cost is 16 dollars and 27 cents. She gives Josh a 20-dollar bill and 50 cents. How much change does Josh need to give her back?

$20.50
- $16.27
$4.23

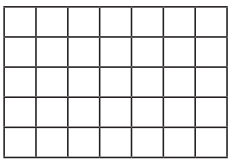
1 $20 | 1 $10
5 $1 | 3 quarters
2 dimes | 5 pennies

INDEPENDENT REVIEW

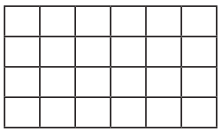
Complete the subtraction problems.

4 5̸2 − 36 = 16	7 8̸1 − 67 = 14	6 7̸4 − 48 = 26

Write the number of square units in each column in each blue box, and then skip count to find the area of each rectangle.



5 + 5 + 5 + 5 + 5 + 5 + 5 = 35



4 + 4 + 4 + 4 + 4 + 4 = 24

Complete the problems. Then round the sums (answers) to the nearest 10 and write them in the purple boxes.

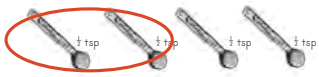
Tens	Ones		Tens	Ones
4	2		5	4
+2	6		+4	2
6	8		9	6

Rounded Sum: 70

Rounded Sum: 100

Circle the number of teaspoons in a tablespoon. See page 284 if needed.

Circle the number of ½ teaspoons in a teaspoon.



Lesson 117

COORDINATE GRAPHS

Days in Each Month Poem

Have the child practice memorizing the poem. Ask the child how many days are in January, March, May, and June.

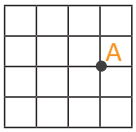
How many days are in each month? It's clear!
February has 28, but 29 each leap year.
Thirty days are in September,
April, June, and November.
The rest have 31.
The rest have 31.

Time

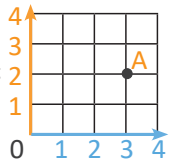
Have the child set the following times on the clock from the math box:

quarter to 3 | quarter after 7 | quarter to 7 | 5:53

○ Read to the child: Look at the point labeled A on the graph to the right. If you want to tell someone where the A is located on the grid, you could say 3 from the left and 2 from the bottom. These would be the point's ***coordinates***.

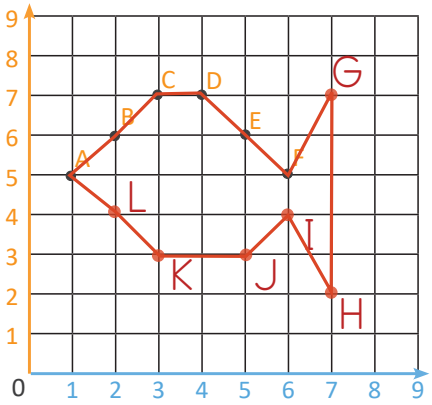


A ***coordinate graph*** uses numbers going horizontally and numbers going vertically to find a point's exact location. Look at the grid to the right. Start at 0 and trace the blue line going right until you reach the vertical line point A is sitting on. The first number coordinate for point A is 3. Next, start at 0 and trace the orange line going up until you reach the horizontal line point A is sitting on. The second coordinate for point A is 2. Together the coordinates are (3, 2). If you told someone these coordinates, he or she would follow the same directions and end up at point A.



(3, 2)

○ Read to the child: Write the coordinates for the points on the coordinate graph below. Remember to go horizontally first and then vertically.



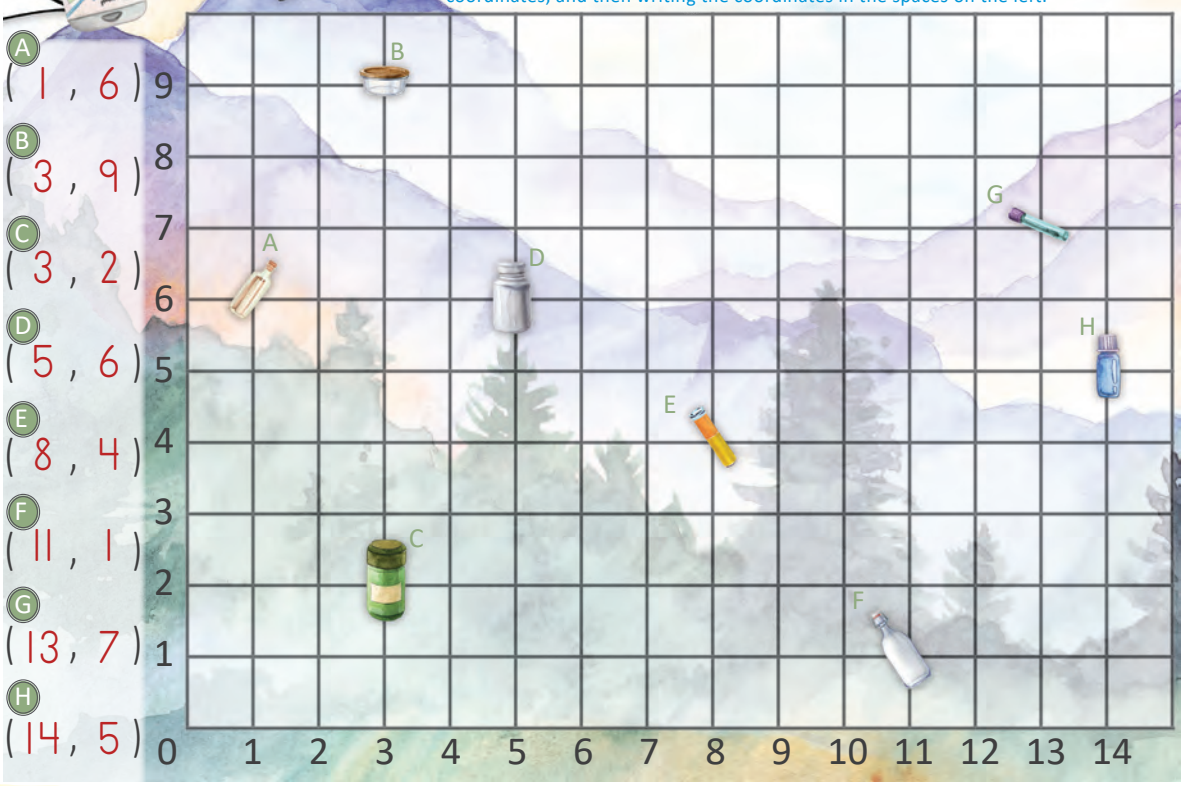
A (1 , 5) D (4 , 7)
B (2 , 6) E (5 , 6)
C (3 , 7) F (6 , 5)

○ Read to the child: Use the coordinates below to plot points G–L on the coordinate graph above. Connect the dots in alphabetical order, connecting L to A at the end, to reveal a picture.

G (7, 7) I (6, 4) K (3, 3)
H (7, 2) J (5, 3) L (2, 4)

Geocache COORDINATES

○ Read to the child: Geocaching is a fun activity where you use GPS coordinates of longitude and latitude (just like our vertical and horizontal lines here) to find hidden objects. The hidden objects are usually small containers with items and names left by people who found them previously. Find these geocache items by finding their coordinates, and then writing the coordinates in the spaces on the left.



INDEPENDENT REVIEW

Write and then complete the subtraction problems with the following totals and costs.

TOTAL: $6.34	TOTAL: $5.16	TOTAL: $9.67	TOTAL: $8.24
COST: $4.13	COST: $3.10	COST: $4.45	COST: $6.11
$6.34 − $4.13 = $2.21	$5.16 − $3.10 = $2.06	$9.67 − $4.45 = $5.22	$8.24 − $6.11 = $2.13

Write the number of days each month has.

September	June	November
30	30	30

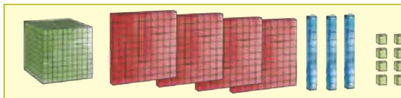
Complete the problems.

326	658	376
+247	+175	+265
573	833	641

Write the standard form and expanded form for each set of base-10 items.

2,113

2,000 + 100 + 10 + 3



1,438

1,000 + 400 + 30 + 8

Complete each problem.

50 + 20 + 20 = 90

40 + 25 + 15 = 80

50 + 65 + 5 = 120

75 + 10 + 25 = 110

Lesson 118

MIXED REVIEW

Money

Take the bills from the math box and give the child several bills in a mixed-up pile (such as 2 $100 bills, 6 $20 bills, 4 $10 bills, 6 $5 bills, and 3 $1 bills) and have the child sort the money into like bills and count the bills. (Start with the highest value bills.) Repeat with different piles of bills several times.

Read to the child: Surprise! We are having a party to celebrate your last lesson for Math 2. You have learned so much and worked so hard. This last lesson will be a review game. Follow the instructions for each activity. Some of them are story problems. Use a whiteboard to find the answer. When you write the correct answer, you get to color one of the party hats on the children on the next page.

The decorations for the party cost $7.53. If you were paying for them and gave the cashier $9.75, how much change would the cashier give you back? Remember to set up the problem as shown.

TOTAL $9.75
COST − $7.53
$2.22

The confetti container says that it holds 375 pieces of confetti. One container wasn't enough, so another was used. How many total pieces of confetti were used? Remember to carry your numbers.

375 + 375 = 750

Find and point to an item at the party that would weigh as much as the following:

1 gram 1 kilogram 1 ... pound

Answers will vary.

1 gram is about the we... ...p.
1 kilogram = 1... ...t the weight of a pineapple)
1 ounce is a... ...eight of a pencil.
1 pound = 16 ounces

There are 6 children at the party. Three of the children are wearing blue shoes. Write a fraction to represent the number of children wearing blue shoes in the whole group. Remember that the whole goes on the bottom and the part goes on the top.

$\frac{3}{6}$ $\frac{\text{Part}}{\text{Whole}}$

Thirty-two balloons were blown up for the party, but 15 pop before the party starts. How many balloons are left? Remember to borrow.

32 − 15 = 17

There is banana bread at the party. Look at the recipe for banana bread below. If you had only a $\frac{1}{2}$ cup and $\frac{1}{2}$ teaspoon, which would you use for each item (except for the eggs) in the recipe, and how many would you need?

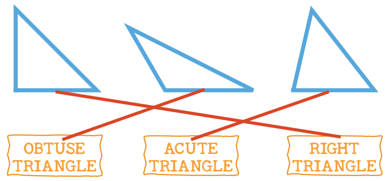
Ingredients
- 3 cups mashed bananas $\frac{1}{2}$ cup = 6
- $1\frac{1}{2}$ cups sugar $\frac{1}{2}$ cup = 3
- 4 eggs
- 4 cups flour $\frac{1}{2}$ cup = 8
- 2 tsp baking powder $\frac{1}{2}$ teaspoon = 4
- 1 tsp salt $\frac{1}{2}$ teaspoon = 2

Directions
1. Preheat oven to 350 °F. Grease two 8x4-inch loaf pans.
2. In a large bowl, sift together the flour, baking powder, and salt.
3. In another bowl, mash the bananas and stir in the eggs and sugar. Stir in the flour mixture and mix until just combined. Pour the batter into the prepared pans.
4. Bake at 350 °F (175 °C) for 55 to 65 minutes or until bread tests done. Remove from oven and cool on a rack for 10 minutes, and then remove from pan and cool completely.

Optional: Make this banana bread recipe together and have the child do the measuring.

INDEPENDENT REVIEW

Draw a line from each triangle to its type.

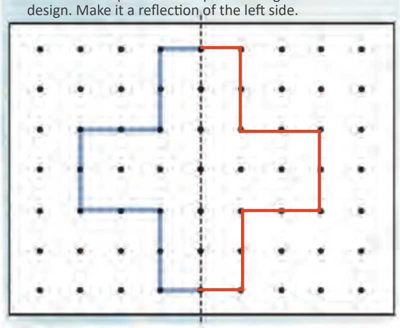


Complete each problem.

60 + 10 + 20 = 90	75 + 25 + 25 = 125
40 + 20 + 15 = 75	55 + 25 + 10 = 90

PEG Patterns Symmetry

Use a colored pencil to complete the right side of the design. Make it a reflection of the left side.



Complete the subtraction problems.

3 11
~~41~~ − 28 = 13

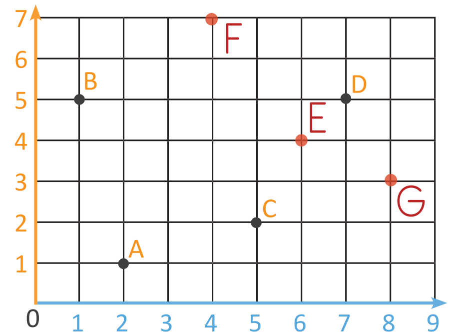
5 13
~~63~~ − 49 = 14

7 12
~~82~~ − 64 = 18

Write the number of days each month has in a leap year.

April: 30
February: 29
March: 31

Write the coordinates of each point below. Then plot the points at the coordinates given. Remember to go horizontally first and then vertically.



A (2 , 1) C (5 , 2)

B (1 , 5) D (7 , 5)

E (6, 4) F (4, 7) G (8, 3)

LESSONS 119-120

Course Assessment

Parent/Teacher

This assessment covers the whole course. Only major concepts are assessed. Children are not expected to master all concepts before moving to Math 3, as Math 3 reviews many concepts taught in Math 2. This assessment helps you see all the child has learned. It is suggested that the child master the following skills before moving to Math 3:

- Count in the thousands; write numbers up to 9,999.
- Spell 1–19.
- Skip count backward and forward by 2s, 3s, 5s, 10s, 25s, 50s, 100s, 1,000s.
- Memorize doubles addition facts to 9 + 9.
- Identify even and odd numbers.
- Complete subtraction with three-digit numbers (with regrouping).
- Complete addition with three-digit numbers (with carrying and regrouping).
- Know time to the minute, quarter after, half past, quarter to, elapsed time, AM and PM, midnight and noon.
- Add and subtract dollars and cents.
- Add and subtract 10 and 100 from numbers in the thousands.
- Know place value and expanded form to the thousands.
- Compare fractions with greater than, less than, and equal signs.
- Write ordinal position to 12th.
- Round to the nearest 10 through 70.
- Write multiplication problems for arrays.
- Determine 2 months from now and 3 days ago.

For Lesson 119 have the child complete only the sections with purple headers. If the child does not have the concept mastered, check the orange "Additional Practice" checkbox for that section and review the concept with the child. For Lesson 120 have the child complete all the orange sections **that are checked**.

Student

ASSESSMENT WITH PARENT/TEACHER

Mark the triangle for any items the child completes incorrectly.

△ Have the child give the answers to these doubles addition facts aloud:

2 + 2 = 4 3 + 3 = 6 4 + 4 = 8 5 + 5 = 10

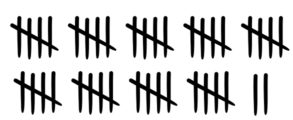
6 + 6 = 12 7 + 7 = 14 8 + 8 = 16 9 + 9 = 18

△ Have the child skip count by 50s from 700 to 1,000.

△ Have the child skip count by 3s from 3 to 30.

△ Have the child write number words for 13 to 19 on the whiteboard. (Note: Number words for 1 to 12 should have been mastered in Math 1.)

△ Have the child give you bills from the math box to equal the tally marks, using the fewest number of bills.



△ Have the child skip count backward from 100 to 25 by 5s.

△ Set the clock from the math box to 4:15. Have the child tell you two ways to say the time. [4:15 and quarter after 4]

△ Set the clock from the math box to 12:30. Have the child tell you two ways to say the time. [12:30 or half past 12]

ASSESSMENT WITH PARENT/TEACHER, CONTINUED

Mark the triangle for any items the child completes incorrectly.

- Have the child give you 86 cents using the fewest coins from the math box.
- Have the child tell you how many are in a dozen [12] and half dozen. [6]
- On the whiteboard have the child create and complete a problem for the story. Dan had $4.25. He spent $2.15. How much money does he have left? $4.25 − $2.15 = $2.10
- On the whiteboard have the child create and complete a problem for the story. Sue had $52.45. She earned $3.43 more. How much money does she have in total? $52.45 + $3.43 = $55.88
- Have the child set the clock from the math box to the following times: midnight, 1:17, 3:47, noon.
- Have the child count backward from 1,000 to 980.
- Have the child tell you all the odd numbers from 90 to 101.

Additional Practice

Complete the sections above for which the triangle is marked.

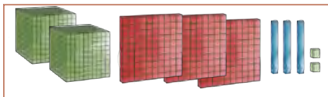
PLACE VALUE AND EXPANDED FORM TO THE THOUSANDS

Write the expanded form of the number.

Thousands	Hundreds	Tens	Ones
7	3	2	7

7,000 + 300 + 20 + 7

Write the standard form represented by the base-10 blocks in the orange box. Write the expanded form in the black boxes.



2,332

2,000 + 300 + 30 + 2

Additional Practice

Write the expanded form of the number.

Thousands	Hundreds	Tens	Ones
6	4	9	2

6,000 + 400 + 90 + 2

Write the standard form represented by the base-10 blocks in the orange box. Write the expanded form in the black boxes.

1,221

1000 + 200 + 20 + 1

WRITING NUMBERS IN THE THOUSANDS/10 AND 100 LESS AND MORE

Write the correct number in each box.

10 less: 3,479

100 less: 3,389 | 3,489 | 3,589 :100 more

10 more: 3,499

Additional Practice

Add 10 to the number.	Subtract 10 from the number.	Add 100 to the number.	Subtract 100 from the number.
61 → 71	59 → 49	422 → 522	375 → 275

CALENDARS

Use the date shown as today. Write the dates listed below.

	June 15, 2030
Two months from now	August 15, 2030
Tomorrow	June 16, 2030
Three days ago	June 12, 2030

Additional Practice

Use the date shown as today. Write the dates listed below.

	December 10, 2025
Two months from now	February 10, 2026
Tomorrow	December 11, 2025
Three days ago	December 7, 2025

Adding and Subtracting Numbers (with Carrying/Borrowing/Regrouping)

Complete the problems.

1 1 398 +243 641	6 1 72 −24 48	1 1 274 +498 772

Additional Practice

Complete the problems.

5 1 60 −46 14	1 1 546 +276 822	4 1 52 −23 29

Ordinal Position to 12

Fill in the missing ordinal numbers.

1st	2nd	3rd	4th
5th	6th	7th	8th
9th	10th	11th	12th

Additional Practice

Fill in the missing ordinal numbers.

1st	2nd	3rd	4th
5th	6th	7th	8th
9th	10th	11th	12th

Rounding with Subtraction and Addition

Complete the addition or subtraction problem and write the answer rounded to the nearest 10.

27 - 10	32 - 6	45 - 15
20	30	30
10 + 6	14 + 20	3 + 1
20	30	0

Additional Practice

Complete the addition or subtraction problem and write the answer rounded to the nearest 10.

16 - 8	50 - 25	22 - 4
10	30	20
6 + 9	20 + 8	2 + 7
20	30	10

Elapsed Time to Half Hour and Hour

Write the elapsed time in the blue box.

5:00 PM — 2 hours — 7:00 PM

Write the end time in the blue box. Include AM or PM.

10:00 AM — 30 minutes elapsed — 10:30 AM

Additional Practice

Write the elapsed time in the blue box.

8:30 AM — 2 hours — 10:30 AM

Write the end time in the blue box. Include AM or PM.

11:00 AM — 30 minutes elapsed — 11:30 AM

ORDER AND COMPARE FRACTIONS/ GREATER THAN, LESS THAN, EQUAL

Write ordinal numbers below the pictures to put them in order from the greatest amount shaded to the least.

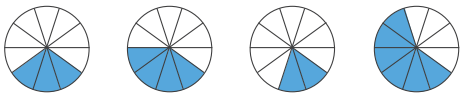
2nd 4th 3rd 1st

Draw a greater than, less than, or equal sign between the two fractions.

 $\frac{3}{6}$ = $\frac{1}{2}$ 

Additional Practice

Write ordinal numbers below the pictures to put them in order from the greatest amount shaded to the least.



3rd 2nd 4th 1st

Draw a greater than, less than, or equal sign between the two fractions.

 $\frac{6}{10}$ > $\frac{4}{10}$ 

MULTIPLICATION

Write the addition problem and multiplication problem shown by the array.

Addition Problem:	8 + 8 + 8 = 24
Multiplication Problem:	3 × 8 = 24

○○○○○○○○
○○○○○○○○
○○○○○○○○

Additional Practice

Write the addition problem and multiplication problem shown by the array.

Addition Problem:	6 + 6 + 6 + 6 = 24
Multiplication Problem:	4 × 6 = 24

× × × × × ×
× × × × × ×
× × × × × ×
× × × × × ×

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