Simply

Good and Beautiful

MATH 4

ANSWER KEY

The Good and the Beautiful

CURRICULUM

Simply Good and Beautiful

MATH 4 ANSWER KEY

The Good and the Beautiful CURRICULUM

Hexagonal Honeycombs

Starting at the circled 3, use skip counting by 3s to color in every third hexagon on the first honeycomb.

On the second honeycomb, start at the circled 6 and use skip counting by 6s to color in every sixth hexagon.

Starting at the circled 9, use skip counting by 9s to color in every ninth hexagon on the third honeycomb.

Look at the numbers you colored in the last honeycomb. Which number pattern do they follow?

EVEN, EVEN, EVEN, EVEN

EVEN, ODD, EVEN, ODD

Lesson Practice

1. Write a sequence by skip counting by 7s.

7, 14, 21, 28, 35, 42, 49, 56, 63

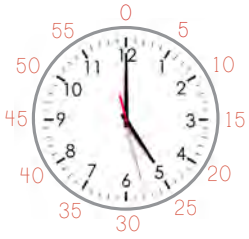
2. Circle the correct pattern for the sequence above.

EVEN, EVEN, EVEN, EVEN EVEN, ODD, EVEN, ODD

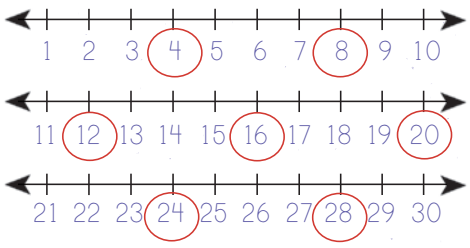
3. Fill in the missing numbers for the following sequence:

8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88

4. Write the minutes around the outside of the clock by skip counting by 5s. The first two have been done for you.

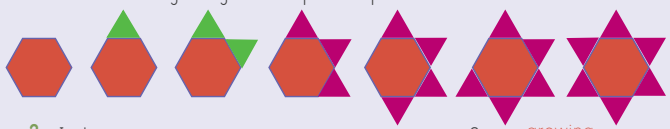


5. Circle the numbers on the number lines that follow the pattern of skip counting by 4s.



Review

1. Continue adding triangles to complete the pattern.



2. Is this pattern a growing pattern or a repeating pattern? growing

3. Complete the multiplication problems.

1 × 9 = 9	3 × 1 = 3	8 × 1 = 8	1 × 1 = 1	5 × 1 = 5	1 × 7 = 7	1 × 0 = 0	2 × 1 = 2

Let's finish our addition review by adding dollars and cents. Look at this problem:

$$\begin{array}{r} \$15.32 \\ +\ \$\ 7.64 \\ \hline \end{array}$$

When adding money, always line up the decimal points and include the dollar signs. You can then add, starting on the right.

$$\begin{array}{r} {\scriptstyle 1} \\ \$15.32 \\ +\ \$\ 7.64 \\ \hline 22\ 96 \end{array}$$

Don't forget! When adding money, you need to write a decimal point and a dollar or a cent sign in the answer.

$$\begin{array}{r} {\scriptstyle 1} \\ \$15.32 \\ +\ \$\ 7.64 \\ \hline \$22.96 \end{array}$$

Do you still have questions after reading the mini lesson? Watch (or rewatch) the video!

Lesson Practice

1. Circle the addends in each problem, and then find the sum.

$$\begin{array}{r} 22 \\ +\ 13 \\ \hline 35 \end{array} \qquad \begin{array}{r} 234 \\ +\ 61 \\ \hline 295 \end{array} \qquad \begin{array}{r} 124 \\ +\ 40 \\ \hline 164 \end{array}$$

2. Use the commutative property to rewrite this equation by changing the order of the addends.

$23 + 15 = 38$

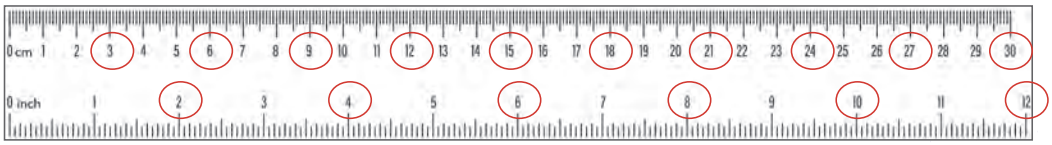
15 + 23 = 38

3. Complete the problems.

$$\begin{array}{r} 351 \\ +\ 178 \\ \hline 529 \end{array} \qquad \begin{array}{r} 34 \\ +\ 29 \\ \hline 63 \end{array} \qquad \begin{array}{r} \$49.42 \\ +\ \$\ 6.37 \\ \hline \$55.79 \end{array} \qquad \begin{array}{r} 126 \\ +\ 103 \\ \hline 229 \end{array} \qquad \begin{array}{r} \$24.61 \\ +\ \$\ 8.63 \\ \hline \$33.24 \end{array}$$

Review

1. On the centimeter side, skip count by 3s and circle the numbers. On the inch side, skip count by 2s and circle the numbers.



2. You and your best friend are each baking cupcakes to sell together this weekend at the farmers market. You baked 36 strawberry cream cupcakes, and your best friend baked 48 double chocolate cupcakes. How many cupcakes will you have altogether to sell this weekend? Show your work in the box to the right.

$$\begin{array}{r} 36 \\ +\ 48 \\ \hline 84 \text{ cupcakes} \end{array}$$

3. You plan to sell each cupcake for $4. Continue this skip counting number pattern to determine how much money you will have after selling 13 cupcakes.

$4, $8, $12, $16, $20, $24, $28, $32, $36, $40, $44, $48, $52

4. On Saturday you and your friend added up all the money you made. After paying your moms back for groceries to make the cupcakes, you had $47.24 and your friend had $54.47. How much money did you and your friend make together?

$$\begin{array}{r} \$47.24 \\ +\ \$54.47 \\ \hline \$101.71 \end{array}$$

5. Label the hours on the clock from 1 to 12, and then draw the hour and minute hands to show 9:15.

6. Circle the even numbers and cross out the odd.

~~25~~ (384) 8,~~471~~ ~~9~~ (222) (6) (50) (20,484) ~~193~~ 5,~~007~~ (528) 4,~~179~~

7. Complete the multiplication problems.

$$\begin{array}{r} 2 \\ \times\ 9 \\ \hline 18 \end{array} \qquad \begin{array}{r} 4 \\ \times\ 2 \\ \hline 8 \end{array} \qquad \begin{array}{r} 6 \\ \times\ 2 \\ \hline 12 \end{array} \qquad \begin{array}{r} 2 \\ \times\ 3 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 2 \\ \times\ 5 \\ \hline 10 \end{array} \qquad \begin{array}{r} 8 \\ \times\ 2 \\ \hline 16 \end{array} \qquad \begin{array}{r} 2 \\ \times\ 2 \\ \hline 4 \end{array} \qquad \begin{array}{r} 2 \\ \times\ 0 \\ \hline 0 \end{array}$$

Lesson Practice

1. Complete the problem and label it with these terms: minuend, difference, subtrahend.

```
  368   Minuend
- 237   Subtrahend
  131   Difference
```

2. Complete the problems.

648 − 335 = 313	91 − 53 = 38	$27.65 − $9.58 = $18.07
753 − 382 = 371	64 − 29 = 35	$76.22 − $6.47 = $69.75

3. In the ancient Mayan civilization, maize (corn) was a staple part of a family's everyday diet and would also be sold to support the family. One Mayan family harvested 324 ears of maize. They need to keep 87 to eat this week. How many ears can they sell?

```
  324
-  87
  237
```

4. The Mayans would eat some maize fresh, but most was boiled with lime, drained, and then crushed with a stone to become a type of dough. If the Mayan family uses 62 of their 87 ears of maize for dough, how many will they have left to eat fresh?

```
  87
- 62
  25
```

5. Each ear of maize can be traded for 7 cacao beans. If you trade 9 ears of maize, how many cacao beans will you receive?

7, 14, 21, 28, 35, 42, 49, 56, 63

Review

1. On the calendar below, skip count by 5s aloud and circle each number you say.

2. On the calendar above, skip count by 6s and draw an X on each of the numbers you say.

3. Which number has both a circle and an X? 30

4. Complete the problems.

259 + 137 = 396	885 − 467 = 418	45 + 39 = 84	62 − 29 = 33

5. What is the eighth month of the year? August

6. Insert greater than, less than, or equal to symbols (>, <, =) in the circles to show comparisons.

320 (>) 302 1,010 (<) 1,100 89 (<) 98

4 + 6 + 9 (>) 3 × 5 3 × 9 (>) 8 + 3 + 7

7. Complete the multiplication problems.

5 × 1 = 5	2 × 5 = 10	7 × 2 = 14	0 × 6 = 0	1 × 8 = 8	4 × 2 = 8	5 × 0 = 0

Lesson Practice

MATH MYSTERIES

Solve the problems below to find the answer for each unknown letter. Then use those letters and their values to answer the riddle at the bottom. Try using inverse operations to solve the problems!

8 + T = 20 20 - 8 = T T = 12	B - 7 = 6 6 + 7 = B B = 13	M - 10 = 15 15 + 10 = M M = 25	A + 8 = 16 16 - 8 = A A = 8	12 + P = 23 23 - 12 = P P = 11
E - 13 = 5 5 + 13 = E E = 18	16 + S = 22 22 - 16 = S S = 6	F - 15 = 15 15 + 15 = F F = 30	5 + E = 19 19 - 5 = E E = 14	T + 4 = 11 11 - 4 = T T = 7
H - 8 = 7 7 + 8 = H H = 15	14 + N = 24 24 - 14 = N N = 10	R - 1 = 8 8 + 1 = R R = 9	O + 9 = 12 12 - 9 = O O = 3	V - 2 = 20 20 + 2 = V V = 22

People lose me more than any other item. What am I?

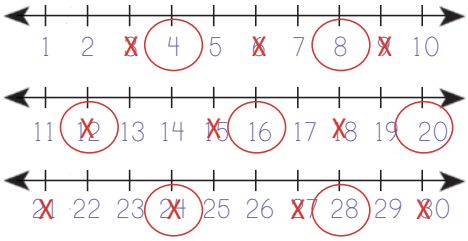
A	T	V	R	E	M	O	T	E
8	7	22	9	14	25	3	12	18

Review

1. Write a fact family for each set of numbers. Each fact family has two addition equations and two subtraction equations.

3, 9, 12	5, 8, 13	9, 13, 22
3 + 9 = 12	5 + 8 = 13	9 + 13 = 22
9 + 3 = 12	8 + 5 = 13	13 + 9 = 22
12 - 3 = 9	13 - 5 = 8	22 - 9 = 13
12 - 9 = 3	13 - 8 = 5	22 - 13 = 9

2. Circle the numbers on the number lines that follow the pattern of skip counting by 4s.



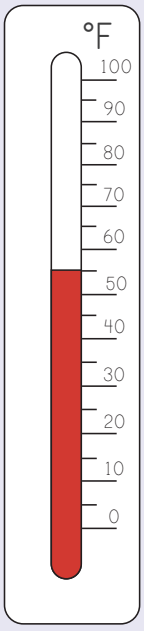
3. On the number lines above, put an X on the numbers that follow the pattern of skip counting by 3s. Which numbers have both a circle and an X?

12, 24

4. Your mom is trying to decide if she wants to make pumpkin pie or apple pie for dessert on Thanksgiving. You volunteer to ask everyone in your entire family which type of pie he or she prefers. You talk to all 23 people who are coming. If 17 of them choose apple pie and the rest choose pumpkin pie, how many people choose pumpkin pie? Show your work in the box to the right.

23 = 17 + X
23 - 17 = X
X = 6

OR 23 - 17 = 6



5. Shade the thermometer to show 55 °F.

6. What is the eleventh month of the year?

November

7. Multiply.

5 × 0 = 0	2 × 4 = 8	6 × 1 = 6	0 × 4 = 0
2 × 8 = 16	4 × 1 = 4	7 × 0 = 0	5 × 4 = 20

Multiplication patterns follow similar rules to addition patterns. While multiplication is adding equal groups together to find the total amount, skip counting is a number pattern with multiples. A multiple of a number is the product of a number and an integer.

Multiplication Rules:

Even × Even = Even
Even × Odd = Even
Odd × Odd = Odd

Notice that any number multiplied by an even number will equal an even number. Multiples of 4 follow two of the multiplication rules listed above. Each multiple of 4 is an even number because 4 is an even number.

Even × Even = **Even** & Even × Odd = **Even**

Multiples of 4	Multiplication Problem	Rule
4	4 × 1	even × odd = even
8	4 × 2	even × even = even
12	4 × 3	even × odd = even
16	4 × 4	even × even = even
20	4 × 5	even × odd = even
24	4 × 6	even × even = even
28	4 × 7	even × odd = even

Lesson Practice

1. Put a box around the factors and find the product.

$\begin{array}{r} 2 \\ \times\ 5 \\ \hline 10 \end{array}$ $\begin{array}{r} 5 \\ \times\ 10 \\ \hline 50 \end{array}$ $\begin{array}{r} 1 \\ \times\ 9 \\ \hline 9 \end{array}$

2. Use the commutative property to rewrite this equation by changing the order of the factors.

12 × 10 = 120

10 × 12 = 120

3. Write a multiplication equation for each array.


2 × 3 = 6


3 × 9 = 27


8 × 8 = 64

4. Write a multiplication problem to represent multiplying groups of objects.


3 × 6 = 18

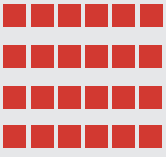

5 × 4 = 20

Read with your parent or teacher

5. Complete the chart.

Multiples of 7	Multiplication Problem	Rule
7	7 × 1	odd × odd = odd
14	7 × 2	odd x even = even
21	7 x 3	odd × odd = odd
28	7 x 4	odd x even = even
35	7 × 5	odd x odd = odd
42	7 x 6	odd × even = even
49	7 x 7	odd x odd = odd

6. Draw an array of squares for the multiplication problem 4 × 6. How many squares did you draw? 24



Multiplication Mastery

Memorizing multiplication facts is an essential part of this course. Knowing the answers to multiplication problems instantly makes many math concepts much easier to teach and to learn.

You will work on memorizing Set A and Set B during this first unit. You will use the Multiplication Mastery Chart on page 395 in the back of the book to keep track of your progress. The course will tell you when to use the chart. In most lessons the course book will instruct you to work for 10 minutes or more on multiplication facts. You will be practicing Set A in this lesson. Ask your parent or teacher which resource from page 5 you will use to practice the facts.

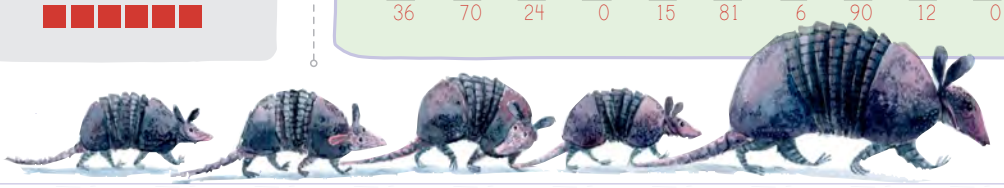
If you already have these multiplication facts memorized, you do not need to complete the 10 minutes of multiplication facts practice, but you will still write the answers to all the problems in the "Multiplication Fact Practice" boxes in each lesson.

In addition to the facts in Set A, you will also practice the 0s, 1s, 10s, and 11s facts in the colored boxes in each review section.

✧ Multiplication Fact Practice ✧

Practice Set A for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this section.

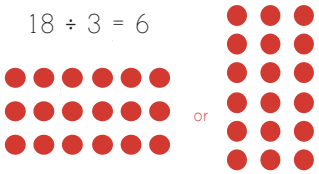
3 × 3 = 9	1 × 6 = 6	8 × 4 = 32	5 × 3 = 15	8 × 8 = 64	9 × 10 = 90	5 × 5 = 25	4 × 6 = 24	4 × 8 = 32	1 × 3 = 3
6 × 6 = 36	10 × 7 = 70	6 × 4 = 24	4 × 0 = 0	3 × 5 = 15	9 × 9 = 81	6 × 1 = 6	10 × 9 = 90	3 × 4 = 12	0 × 8 = 0



Lesson Practice

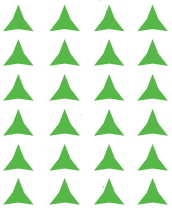
1. Draw an array for the division equation.

18 ÷ 3 = 6



or

2. Write a division equation for this array.



24 ÷ 6 = 4

or

24 ÷ 4 = 6

3. Write a division equation for this array.

9 ÷ 3 = 3

4. Draw an array for the division equation.

10 ÷ 5 = 2

or

5. The terra-cotta warriors in China (pictured below) were discovered in 1974 when workers digging a well stumbled upon the buried figures. There are an estimated 8,000 warriors at the site.

Let's divide a group of 12 warriors into 2 equal groups. How many warriors are in each group? 6

Now divide the 12 warriors into 4 equal groups. How many warriors are in each group? 3

Can you divide the 12 warriors into 3 equal groups? How many warriors are in each group? 4

6. What is the divisor in this equation? 5
What is the quotient? 6

30 ÷ 5 = 6

Review

1. Shade half of each shape.

2. What time is it when someone says it is "quarter to eight"?

7:45

3. Complete the chart.

Multiples of 9	Multiplication Problem	Rule
9	9 × 1	odd × odd = odd
18	9 × 2	odd × even = even
27	9 × 3	odd × odd = odd
36	9 × 4	odd × even = even
45	9 × 5	odd × odd = odd
54	9 × 6	odd × even = even
63	9 × 7	odd × odd = odd

4. Change these addition problems to multiplication problems.

12 + 12 + 12 + 12 4 × 12

3 + 3 + 3 + 3 + 3 + 3 + 3 7 × 3

5. Complete each problem.

526 − 248 = 278	$35.35 + $17.62 = $52.97	999 + 999 = 1,998
Q + 4 = 18 Q = 18 − 4 Q = 14	P − 7 = 18 P = 18 + 7 P = 25	
379 + 181 = 560	$25.86 − $13.95 = $11.91	888 + 777 = 1,665

✧ Multiplication Fact Practice ✧

Practice Set A for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this section.

8 × 8 = 64	4 × 6 = 24	3 × 5 = 15	1 × 2 = 2	6 × 6 = 36	9 × 10 = 90	5 × 1 = 5	0 × 4 = 0
6 × 4 = 24	3 × 3 = 9	10 × 1 = 10	5 × 5 = 25	5 × 3 = 15	9 × 9 = 81	8 × 4 = 32	6 × 10 = 60

The value of each digit can be found by multiplying the digit and its place value.

3	1	9	,	7	6	2	,	4	5	8
hundred millions	ten millions	millions		hundred thousands	ten thousands	thousands		hundreds	tens	ones

PLACE VALUE

3 × 100,000,000 = 300,000,000
1 × 10,000,000 = 10,000,000
9 × 1,000,000 = 9,000,000
7 × 100,000 = 700,000
6 × 10,000 = 60,000
2 × 1,000 = 2,000
4 × 100 = 400
5 × 10 = 50
8 × 1 = 8

Math Tip

Multiplying a number by one does not change the value of the number.

Lesson Practice

1. Read the following numbers aloud to your parent or teacher.
   375,000 16,400 8,650,108 65,240,312
2. Write commas in the following numbers. The first one has been done for you.
   4,895,217 21,487 5,790 355,018 541,235,017
3. Write the missing labels on the place value chart. Then write this number at the bottom of the chart: 214,786,345

Billions			Millions			Thousands			Ones		
Hundred Billions	Ten Billions	Billions	Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
			2	1	4	7	8	6	3	4	5

4. Which digit in the number above is in the hundred thousands place? 7
5. Which digit in 24,578,105 is in the ten millions place? 2
6. Which digit in 68,741,024 is in the ten thousands place? 4

✧ Multiplication Fact Practice ✧

Practice Set A for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this section.

5 × 3 = 15	8 × 4 = 32	5 × 1 = 5	3 × 3 = 9	9 × 10 = 90	5 × 5 = 25
9 × 9 = 81	4 × 3 = 12	8 × 8 = 64	0 × 4 = 0	6 × 6 = 36	6 × 4 = 24

African Art

Complete the math problems to discover the colors you need to complete the picture. You can color in all the small spaces without numbers with any color you'd like.

53 − 37 = 16 Light Brown

6 × 2 = 12 Orange

94 − 87 = 7 Dark Blue

10 × 5 = 50 Light Purple

36 + 34 = 70 Dark Green

7 × 0 = 0 Yellow

69 − 55 = 14 Light Green

3 × 2 = 6 Dark Brown

19 + 11 = 30 Light Blue

5 × 1 = 5 Dark Purple

Lesson Practice

ALL ABOARD!

Write each number in expanded form above the trains. Write one number for each train car. You do not need to write anything for place values of 0.

20 + 2

22

200,000 + 50,000 + 6,000 + 30 + 9

256,039

7,000 + 800 + 10 + 7

7,817

3,000 + 400 + 80

3,480

60,000 + 9,000 + 400 + 40 + 8

69,448

2,000,000 + 100,000 + 40,000 + 6,000 + 800 + 30

2,146,830

Lesson Practice Continued

1. Write the following numbers in expanded form.

24,312 — 20,000 + 4,000 + 300 + 10 + 2

65,108 — 60,000 + 5,000 + 100 + 8

5,877 — 5,000 + 800 + 70 + 7

2. Write the standard form for each number.

6,000 + 300 + 40 + 2 — 6,342

300,000 + 6,000 + 500 + 20 — 306,520

90,000 + 8,000 + 70 + 4 — 98,074

20,000 + 6,000 + 100 + 20 — 26,120

Review

1. Write the missing labels on the place value chart. Then write this number at the bottom of the chart: 248,147,890

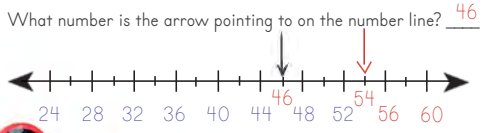
Billions			Millions			Thousands			Ones		
Hundred Billions	Ten Billions	Billions	Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
			2	4	8	1	4	7	8	9	0

2. Which digit in 415,201,325 is in the ten millions place? 1

3. Write commas in the following numbers.

9,814,526 25,741 8,547 584,765,012

4. What number is the arrow pointing to on the number line? 46



5. Fill in the last two numbers on the number line.

6. Draw an arrow to indicate the number 54 on the number line.

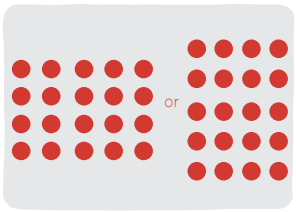
7. Change these addition problems to multiplication problems and find the products.

4 + 4 + 4 + 4 — 4 x 4 = 16

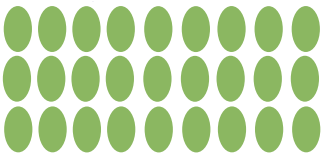
7 + 7 + 7 — 3 x 7 = 21

8. Draw an array for the division equation.

20 ÷ 4 = 5



9. Write a division equation for this array.



27 ÷ 3 = 9
or
27 ÷ 9 = 3

10. Complete each problem.

359 + 147 = 506	628 - 467 = 161	$45.95 + $35.44 = $81.39	$72.65 - $48.24 = $24.41

T + 4 + 3 = 12 T = 12 - 4 - 3 T = 5	P - 4 = 18 P = 18 + 4 P = 22	25 - S = 16 S = 25 - 16 S = 9

11. Label the hours on the clock from 1 to 12, and then draw the hour and minute hands to show 6:44.

12. If you have 3 quarters, 2 dimes, and 4 pennies, how much money do you have?

3 x 0.25 = 0.75
2 x 0.10 = 0.20
4 x 0.01 = 0.04

0.75
0.20
+ 0.04
0.99

99 cents

✧ Multiplication Fact Practice ✧

Practice Set A for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this section.

3 × 3 = 9	1 × 9 = 9	8 × 4 = 32	5 × 3 = 15	8 × 8 = 64	2 ×10 = 20	5 × 5 = 25	4 × 6 = 24	1 × 4 = 4	5 × 0 = 0
6 × 6 = 36	10 × 4 = 40	6 × 4 = 24	8 × 0 = 0	3 ×10 = 30	9 × 9 = 81	3 × 1 = 3	5 ×10 = 50	3 × 5 = 15	3 × 4 = 12

Lesson Practice

1. Write the following numbers using digits.

thirty-seven — 37
seventeen — 17
eighty — 80
six hundred six — 606
twenty-one thousand, three hundred fifteen — 21,315
sixty-four million, five hundred thousand, thirty-two — 64,500,032

2. Write the following numbers using words.

56 — fifty-six
705 — seven hundred five
12,843 — twelve thousand, eight hundred forty-three
53,492,207 — fifty-three million, four hundred ninety-two thousand, two hundred seven

Review

1. Write the numbers in expanded form. The first one is done for you.

354 — 300 + 50 + 4

1,264 — 1,000 + 200 + 60 + 4

48,207 — 40,000 + 8,000 + 200 + 7

748 — 700 + 40 + 8

2. Which digit in 325,210,311 is in the hundred millions place? 3

3. Write a multiplication problem to represent multiplying groups of flowers.

5 x 3 = 15

4. Complete each problem.

K + 6 = 14
K = 14 - 6
K = 8

G - 7 = 8
G = 8 + 7
G = 15

$$\begin{array}{r} 535 \\ -\ 274 \\ \hline 261 \end{array}$$

$$\begin{array}{r} \$\ 45.95 \\ +\ \$\ 35.44 \\ \hline \$\ 81.39 \end{array}$$

12 + 2 + 45 = 59

3 + 11 + 10 = 24

5. Li Wei, a rice farmer in China, had an excellent growing year in his rice fields. Each of his 8 rice paddies produced 3 tons of rice. How many tons of rice did he grow altogether? Show your work in the box to the right. Don't forget to label your answer.

8 × 3 = 24

24 tons of rice

6. Last year Li Wei and one of his neighbors combined their rice crops in order to sell them for a higher price. Li Wei's neighbor produced 12 tons of rice, and together they had 25 tons to sell. How many tons of rice did Li Wei produce last year? Show your work in the box below.

$$\begin{array}{r} 25 \\ -\ 12 \\ \hline 13 \end{array}$$

13 tons of rice

7. Continue the number pattern.

310, 320, 330, 340, 350, 360, 370

8. Label the clock from 1 to 12, and then draw the hour and minute hands to show 3:35.

9. On the clock above, how many minutes is it until 4 o'clock? 25 minutes

✧Multiplication Fact Practice✧

Practice Set A for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this section.

5 × 5 = 25	3 × 5 = 15	6 × 4 = 24	3 × 3 = 9	1 × 6 = 6	5 × 3 = 15	8 × 4 = 32
10 × 7 = 70	6 × 1 = 6	6 × 6 = 36	3 × 5 = 15	8 × 8 = 64	9 × 9 = 81	4 × 6 = 24

Lesson Practice

Use the street map to answer the questions.

1. Are the streets lines or line segments? Why?
   Hint: Review the definitions in the mini lesson.
   Line segments. They have two end points.
2. What is the name of one street running vertically?
   Answers may vary. Example: 1st St.
3. What is the name of one street running horizontally?
   Answers may vary. Example: Jefferson Ave.
4. What is the name of one street running in an oblique direction?
   Answers may vary. Example: Center Blvd.
5. What are the names of two streets that are parallel to each other?
   Answers may vary. Example: Washington Ave. and Hamilton Ave.
6. What are the names of two streets that are perpendicular to each other?
   Answers may vary. Example: Madison Ave. and 3rd St.
7. What are the names of two streets that intersect but are not perpendicular?
   Answers may vary. Example: Adams Ave. and Main St.

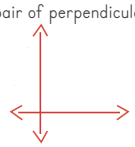
Review

8. Draw a line segment.

9. Draw a pair of horizontal parallel lines.

10. Draw a pair of oblique intersecting lines.

11. Draw a pair of perpendicular lines.



12. Draw a pair of vertical parallel lines.

1. Write the following numbers using words.

28 twenty-eight

59 fifty-nine

307 three hundred seven

47,126 forty-seven thousand, one hundred twenty-six

4. Write the following numbers using digits.

sixty-seven 67

fourteen 14

thirty 30

nine hundred four 904

eighty-one thousand, six hundred thirty-seven 81,637

2. Continue the pattern.

5. Continue the number pattern.

182, 186, 190, 194,
198, 202, 206

3. Fill in the missing numbers and draw an arrow indicating the number 125.

✧Multiplication Fact Practice✧

Practice Set A for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this section.

5 × 5 = 25	3 × 5 = 15	6 × 4 = 24	3 × 3 = 9	1 × 6 = 6	5 × 3 = 15	8 × 4 = 32
10 × 7 = 70	6 × 1 = 6	6 × 6 = 36	3 × 4 = 12	8 × 8 = 64	9 × 9 = 81	4 × 6 = 24

Lesson Practice

If we round this number to the nearest million, we look at the digits in the millions place and the hundred thousands place.

5,782,591

The digit in the millions place rounds up to 6 because the digit in the hundred thousands place is 5 or greater. This would make the nearest million 6,000,000.

Original Number	Rounded to Nearest Million
5,782,591	6,000,000

To round this number to the nearest million, we still look at the digits in the millions place and the hundred thousands place.

5,282,591

The digit in the millions place rounds to 5 if the digit in the hundred thousands place is 4 or less. The digit in the hundred thousands place is 2, so it rounds down. This means the nearest million is 5,000,000.

Original Number	Rounded to Nearest Million
5,282,591	5,000,000

Round the distance from each planet to the sun to the nearest million. Underline the millions place, circle the hundred thousands place, and round. The first one has been done for you.

EARTH 92,955,807 miles 93,000,000 miles

COOL FACT: EARTH'S ROTATION IS GRADUALLY GETTING FASTER AFTER DECADES OF SLOWING.

JUPITER 483,895,014 miles 484,000,000 miles

COOL FACT: JUPITER IS THE FASTEST SPINNING PLANET IN OUR SOLAR SYSTEM.

SATURN 886,951,249 miles 886,000,000 miles

COOL FACT: SATURN ORBITS THE SUN ONCE EVERY 29.4 EARTH YEARS.

URANUS 1,838,657,331 miles 1,839,000,000 miles

COOL FACT: URANUS WAS THE FIRST PLANET DISCOVERED BY A TELESCOPE.

NEPTUNE 2,788,674,218 miles 2,789,000,000 miles

COOL FACT: THE AVERAGE TEMPERATURE ON NEPTUNE IS -392 °F.

Review

1. Draw a pair of perpendicular line segments.

2. Draw a pair of horizontal parallel lines.

3. Which digit in 98,415,201,325 is in the ten millions place? 1

4. Round each number below to the nearest ten, then the nearest hundred, and then the nearest thousand. The first one has been done for you.

	TENS	HUNDREDS	THOUSANDS
2,462	2,460	2,500	2,000
6,829	6,830	6,800	7,000
37,124	37,120	37,100	37,000
5,555	5,560	5,600	6,000

5. Complete the addition and subtraction problems.

359 + 147 = 506	628 - 467 = 161	$45.95 + $35.44 = $81.39	$72.65 - $48.24 = $24.41

6. Solve for the unknowns.

Q + 4 = 22	C - 14 = 9	J + 7 = 26	P - 5 = 16
Q = 22 - 4	C = 9 + 14	J = 26 - 7	P = 16 + 5
Q = 18	C = 23	J = 19	P = 21

7. Yuri Gagarin was the first human to journey into outer space. On April 12, 1961, he orbited the earth once before returning to Earth. That one orbit took 108 minutes. How long would it have taken him to orbit the earth 6 times? Write the multiplication problem you could use to find out.

1 orbit = 108 minutes
6 orbits = ? minutes

108 x 6

☑ Multiplication Fact Quiz ☑

Have your parent or teacher quiz you on the Set A multiplication facts below and circle any facts you missed. You will be doing targeted practice on these facts for the next few lessons.

5 × 3 = 15	8 × 4 = 32	8 × 8 = 64	3 × 4 = 12	5 × 5 = 25	9 × 9 = 81	6 × 4 = 24	6 × 6 = 36	3 × 3 = 9

Lesson Practice

1. Complete the following problems using the Number Line Hopping mental math strategy. Visualize a number line in your head, start at one number, and hop up the tens and ones.

62 + 34 = 96 55 + 19 = 74 17 + 62 = 79

2. Complete the following problems using the Giving Ones mental math strategy. Give some of the ones in one number to the other to add up to the nearest ten.

36 + 28 = 64 19 + 72 = 91 47 + 45 = 92

3. Complete the following problems using the Adding Place Values mental math strategy. Split each number into tens and ones. Add the tens, add the ones, and then add the sums.

12 + 57 = 69 38 + 47 = 85 83 + 15 = 98

4. Complete the following problems using the mental math strategy that is easiest for you. You might use a different strategy for each problem or the same for all three.

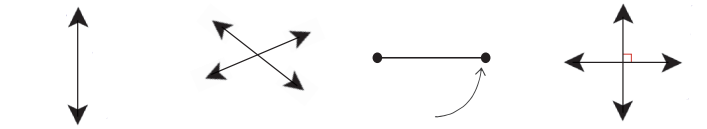
51 + 37 = 88 26 + 48 = 74 19 + 63 = 82

Which strategy or strategies did you use? Answers may vary.

Review

1. Name the geometric figures using the word bank.

line segment oblique line parallel lines intersecting lines
perpendicular lines vertical line horizontal line endpoint



Vertical Line | Intersecting Lines | Endpoint | Perpendicular Lines

Parallel Lines | Line Segment | Oblique Line | Horizontal Line

2. Write the place value of the red digit in each number, and then round the number to that place value. The first one has been done for you.

6,247,158 — ten thousands — 6,250,000

4,819,310 — thousands — 4,819,000

9,120,488 — hundreds — 9,120,500

7,349,751 — millions — 7,000,000

5,617,633 — hundred thousands — 5,600,000

3. A Nepalese Sherpa named Kami Rita has climbed Mt. Everest more than any other person (as of 2020). He has reached the summit 24 times. Kami Rita was born in 1970, and he climbed the mountain for the first time in 1994. How old was he when he first summited Mt. Everest? Write a subtraction problem to find the answer. Show your work below.

```
 1994
- 1970
   24
```

24 years old

4. Complete the problems.

672 − 274 = 398	535 − 147 = 388	176 − 39 = 137
672 + 274 = 946	535 + 147 = 682	176 + 39 = 215

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set A quiz in Lesson 11. Then complete the problems in this section.

9 × 10 = 90	3 × 5 = 15	4 × 6 = 24	3 × 3 = 9
7 × 1 = 7	8 × 8 = 64	10 × 0 = 0	8 × 4 = 32
9 × 9 = 81	5 × 3 = 15	1 × 2 = 2	5 × 5 = 25
4 × 8 = 32	4 × 3 = 12	6 × 6 = 36	6 × 4 = 24

Lesson Practice

1. Name each type of angle.

acute | right | straight | obtuse

2. What type of angle is formed by the missing slices of pizza?

acute | obtuse | straight | right

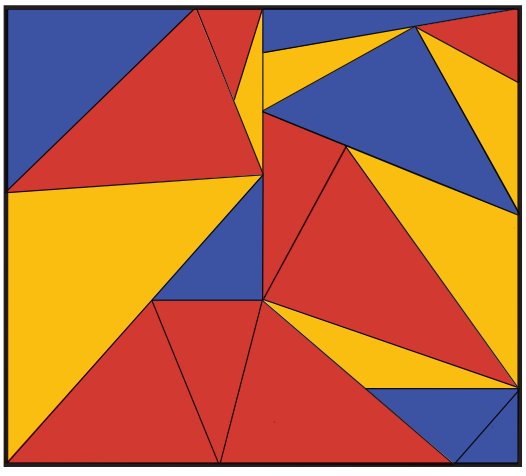
3. Below are the measurements for six different angles. Based on the measurement, determine which type of angle is being formed and draw a line to it. Angle names can be used more than once.

38° — acute
90° — obtuse
127° — right
74° — straight
180°
169°

Triangle Angles

Locate a triangle in the design. If the triangle has a right angle (90°), color it BLUE. If the triangle has an obtuse angle (between 90° and 180°), color it YELLOW. If the triangle has only acute angles (less than 90°), color it RED. Repeat for all the triangles.

Hint: An easy way to tell the type of angle is to use the corner of a piece of paper. If the corner fits into the angle perfectly, it's a right angle; if the angle is narrower than the corner, it's an acute angle; and if it's wider, it's an obtuse angle.



Review

1. Complete the following problems using mental math strategies.

14	28	64	51	72
+ 38	+ 43	+ 31	+ 45	+ 27
52	71	95	96	99

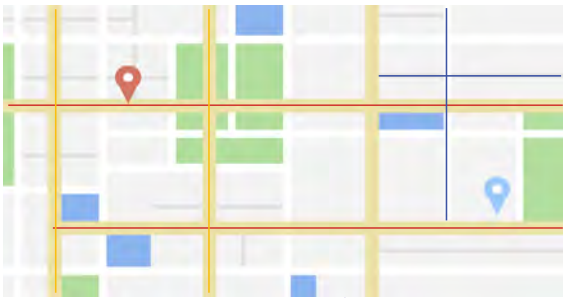
2. Circle the digit in the thousands place, and then write the number in expanded form.

54267 50,000 + 4,000 + 200 + 60 + 7

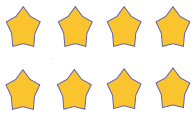
7654 7,000 + 600 + 50 + 4

37005 30,000 + 7,000 + 5

3. On the map below, trace a pair of horizontal parallel streets in red. Trace a pair of vertical parallel streets in yellow. Trace a pair of perpendicular streets in blue. Answers may vary. Examples shown below.



4. Write a division equation for this array.



8 ÷ 2 = 4
or
8 ÷ 4 = 2

5. Complete the problems.

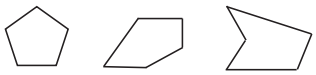
609	472	872	342
- 371	- 274	- 531	- 81
238	198	341	261

Targeted Multiplication Fact Practice

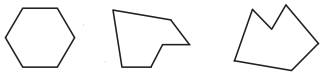
Practice any problems you missed in your Set A quiz in Lesson 11. Then complete the problems in this section.

8 × 4 = 32	3 × 3 = 9	4 × 6 = 24	9 × 9 = 81	5 × 3 = 15	8 × 8 = 64	5 × 5 = 25
1 × 2 = 2	3 × 4 = 12	4 × 8 = 32	8 × 10 = 80	0 × 0 = 0	6 × 6 = 36	6 × 4 = 24

Sometimes the lengths of the sides are all the same. Other times the lengths are different. No matter the length of each side, the polygon still has the same name. For example, all the shapes below are pentagons because they all have five sides.



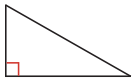
And all of these shapes are hexagons because they all have six sides.



If a polygon has all sides of equal length and all angles of equal measure, it is called a ***regular polygon***. If a polygon does not have equal sides or angles, it is an ***irregular polygon***.

Regular Polygon

Equal sides & angles



Unequal sides & angles

Irregular Polygon

Lesson Practice

Identify each polygon below by counting the number of sides and writing that number inside the shape. Then write its name and indicate whether it is a regular or irregular polygon.

3 — Triangle — (Regular) Irregular

8 — Octagon — (Regular) Irregular

5 — Pentagon — Regular (Irregular)

4 — Rectangle — Regular (Irregular)

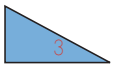
10 — Decagon — (Regular) Irregular

7 — Heptagon — Regular (Irregular)

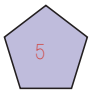
8 — Octagon — Regular (Irregular)

9 — Nonagon — Regular (Irregular)

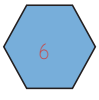
11 — Hendecagon — Regular (Irregular)



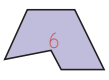
3 — Triangle — Regular (Irregular)



5 — Pentagon — Regular (Irregular)



6 — Hexagon — Regular (Irregular)



6 — Hexagon — Regular (Irregular)

12 — Dodecagon — Regular (Irregular)

10 — Decagon — Regular (Irregular)

Review

1. Draw each of the following angles: right angle, acute angle, obtuse angle, straight angle.

2. Fill in the blanks:

- A right angle is 90 degrees.
- An obtuse angle is more than 90 degrees but less than 180 degrees.
- A straight angle is 180 degrees.
- An acute angle is less than 90 degrees.

The Pentagon building in Arlington, Virginia, USA

3. Complete the problems.

$128.46	$19.70	$45.95
+ $64.72	+ $61.50	- $35.44
$193.18	$81.20	$10.51

$946.72	$73.73
- $467.32	+ $18.18
$479.40	$91.91

4. Complete the problems using mental math.

52	19	77	33
+ 27	+ 46	+ 14	+ 39
79	65	91	72

5. Round these numbers to the nearest million.

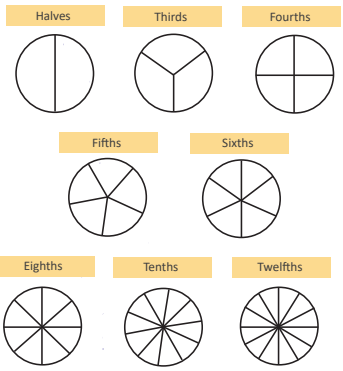
7,541,205	8,000,000
24,874,148	25,000,000
354,245,789	354,000,000
2,672,100	3,000,000

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set A quiz in Lesson 11. Then complete the problems in this section.

8 × 0 = 0	8 × 4 = 32	3 × 3 = 9	4 × 6 = 24	9 × 9 = 81	5 × 3 = 15	8 × 8 = 64	5 × 5 = 25
4 × 8 = 32	4 × 3 = 12	3 × 5 = 15	10 × 0 = 0	8 ×10 = 80	3 × 4 = 12	6 × 6 = 36	6 × 4 = 24

You will write many different fractions in this course. They include halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.



Fractions that have the same numerator and denominator are equal to one whole.

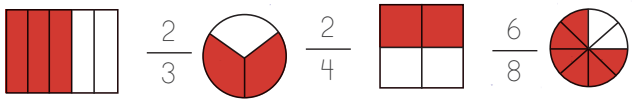
$\frac{4}{4} = 1$

Lesson Practice

1. Write the fraction for the shaded part of each of the shapes.

$\frac{5}{6}$ $\frac{3}{10}$ $\frac{5}{12}$ $\frac{3}{4}$

2. Shade in parts of the shapes to match the fractions listed.



$\frac{3}{5}$ $\frac{2}{3}$ $\frac{2}{4}$ $\frac{6}{8}$

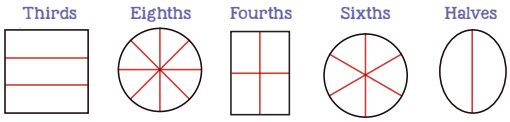
3. Fill in the blanks. *Need help? Refer to the mini lesson if you get stuck.*

The numerator is the number of parts being referred to in a fraction and is the top number. The denominator is the total number of equal parts that make a whole and is the bottom number.

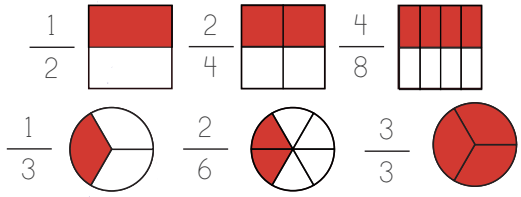
4. Write a fraction that shows how many people in this family are roasting marshmallows. Then write a fraction that shows how many people are wearing red shirts.

$\frac{3}{5}$ $\frac{1}{5}$

5. Draw lines to divide each shape into the fractional amount listed.



6. Divide and shade the shapes to show the indicated fractions.



7. What fraction of the letters in the word MISSISSIPPI are the letter I? 4/11

8. What fraction of your family is younger than 14? Answers may vary.

Read with your parent or teacher

You are now ready to take your first Multiplication Mastery Assessment. Have your parent or teacher quiz you on Multiplication Set A using the Multiplication Mastery Chart on page 395.

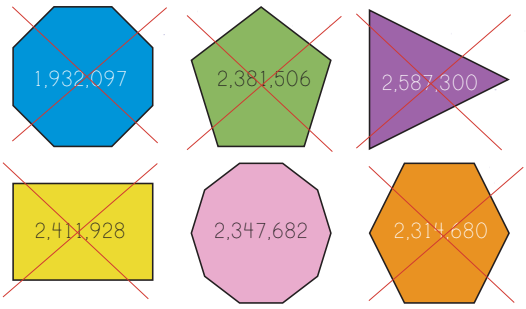
Parent/Teacher: Indicate which facts from Set A the student has mastered in the "Mastered" column on page 395. The student will continue to review and practice these facts throughout the course.

Review

MATH MYSTERIES

Who Am I?

Read the clues below to determine the mystery number.



- I am more than 2,000,000.
- I am less than 2,500,000.
- I have a 3 in the hundred thousands place.
- Rounded to the nearest hundred thousand, I'm 2,300,000.
- I am not inside the hexagon.
- Who am I? 2,347,682

What is the name of the shape the mystery number is in?

decagon

Lesson 16

REVIEW GAMES

Complete *Mental Math Map Mysteries*.
There is no video for this lesson.

Number Search

(Writing and Reading Numbers)

Write each number using digits, and then circle it in the puzzle below. Don't forget the commas! Hint: Numbers are vertical and horizontal only.

a. thirty-six thousand, four hundred eighty-two 36,482
b. fifty-seven million, twenty-eight thousand, two hundred fifty-nine 57,028,259
c. two million, eight hundred nineteen thousand, six hundred seven 2,819,607
d. fifty-one thousand, four hundred twenty-six 51,426
e. thirty-two thousand, four hundred ninety-five 32,495
f. nine million, six hundred five thousand, one hundred fifty-three 9,605,153
g. four million, two hundred forty-eight thousand, eight hundred thirteen 4,248,813
h. forty-one million, four hundred fifty-eight thousand, two hundred fifty-eight 41,458,258

5	1	9	7	8	5	4	2
9	4	2	4	8	8	1	3
6	4	8	2	1	3	4	9
0	5	1	4	2	6	5	3
5	8	9	0	3	4	8	2
1	5	6	7	9	8	2	4
5	7	0	2	8	2	5	9
3	2	7	1	5	3	8	5

Gifts Galore

(Adding and Subtracting)

In Japan at midsummer, people give each other gifts to show love and appreciation. These gifts are called *ochugen*. Does Niko have enough money to buy ochugen for all of her family and friends? Add and subtract to find out.

1. Niko earned $78.45 babysitting and $46.28 weeding gardens. How much does she have to spend?
$ 78.45 + $ 46.28 = $ 124.73

2. Niko purchased a box of *higashi*, molded candies, for her older brother for $18.22.
$ 124.73 - $ 18.22 = $ 106.51

3. Next Niko bought *manjū*, steamed buns filled with red bean paste, for her parents for $32.68.
$ 106.51 - $ 32.68 = $ 73.83

4. Niko picked up a bouquet of *ajisai* flowers for her church teacher for $27.56.
$ 73.83 - $ 27.56 = $ 46.27

5. Finally, Niko bought a *shuji*, or calligraphy brush, for her grandmother for $39.27.
$ 46.27 - $ 39.27 = $ 7.00

How much money does Niko have left? $ 7.00

MATH MYSTERIES

Planetary Puzzles

(Rounding and Place Value)

We used to consider our solar system to have nine planets until Pluto was downgraded to a dwarf planet by the International Astronomical Union in 2006. What is the distance in miles between Pluto and the sun? Complete the problems below to find out!

Round the following numbers to the nearest THOUSAND and write the rounded numbers on the lines provided.

Hint: Underline the thousands place and circle the hundreds place.

6,421 → 6,000

22,314 → 22,000

1,845 → 2,000

93,620 → 94,000

Round the following numbers to the nearest HUNDRED and write the rounded numbers on the lines provided.

Hint: Underline the hundreds place and circle the tens place.

592 → 600

8,302 → 8,300

724 → 700

4,552 → 4,600

Round the following number to the nearest TEN THOUSAND and write the rounded number on the line provided.

Hint: Underline the ten thousands place and circle the thousands place.

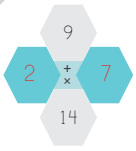
724,671 → 720,000

Write the numbers from the colored boxes in the corresponding boxes below to find out how many miles Pluto is from the sun.

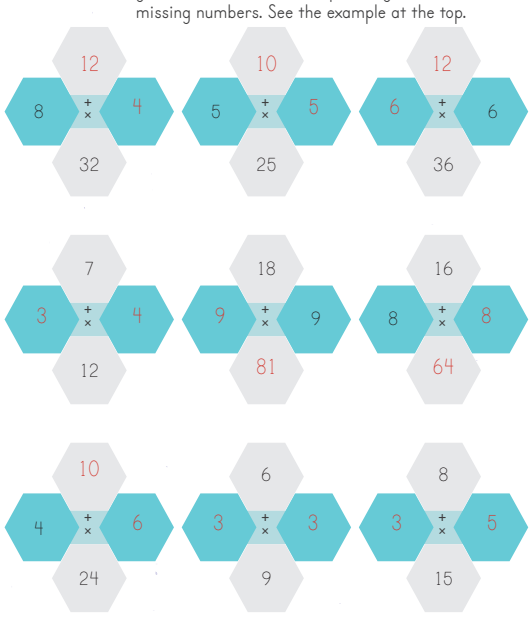
3,677,962,704

Handy Hexagons

(Multiplication Set A, Division, and Unknowns)



For each shape, the numbers in the blue hexagons will equal the number on the top when added together. The same numbers will equal the number on the bottom when multiplied together. Use the given numbers in each shape to figure out the missing numbers. See the example at the top.



See the Reference Guide on page 394.

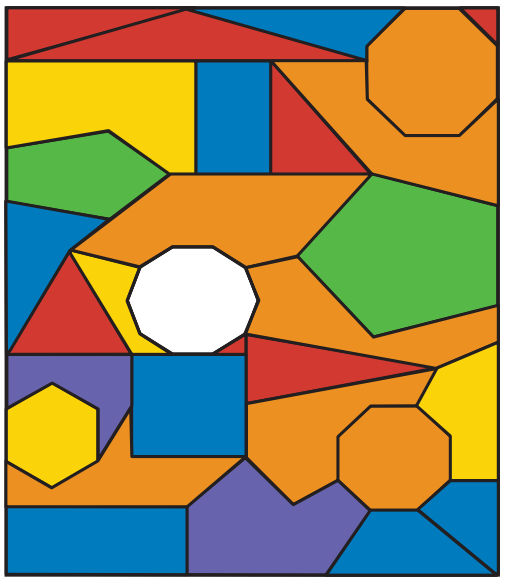
Peculiar Polygons

(Polygons and Angles)

Count the sides of each polygon and color it according to the key.

Triangles	Red	Hexagons	Yellow
Quadrilaterals	Blue	Heptagons	Purple
Pentagons	Green	Octagons	Orange

Which shape is not colored? Decagon



Lesson Practice

1. Complete the following problems using the Number Line Hopping strategy. Visualize a number line in your head starting with the first number, and then hop down the tens and ones.

58 - 27 = 31 92 - 61 = 31 65 - 18 = 47

2. Complete the following problems using the Add to Both strategy. Add ones to the number being subtracted to get to the nearest ten, and then add the same amount to the other number. Then subtract.

36 - 28 = 8 75 - 43 = 32 29 - 16 = 13

3. Complete the following problems using the Subtracting Place Values strategy. Start with the larger number and subtract the tens first and then the ones of the smaller number.

44 - 32 = 12 81 - 47 = 34 96 - 63 = 33

4. Complete the following problems using the strategy that is easiest for you. You might use a different strategy for each problem or the same for both.

48 - 26 = 22 63 - 19 = 44

Which strategy or strategies did you use? Answers may vary. Example: Number Line Jumping, Give to Both, Tens and Ones

Review

1. Shade each circle to match the fraction listed.

$\frac{1}{2}$ $\frac{2}{4}$ $\frac{3}{6}$ $\frac{4}{8}$ $\frac{5}{10}$ $\frac{6}{12}$

2. What do you notice about each of the fractions you shaded above? They are all half of the whole shape

3. Which of the polygons below have right angles? square, triangle

4. Which of the polygons below is an irregular polygon? triangle

5. What is the name of the orange polygon? hexagon

6. What is the name of the blue polygon? pentagon

7. Which polygons have only obtuse angles? pentagon, hexagon, octagon

8. Complete the problems.

627	224	450	394	567
-578	- 57	+172	+437	- 93
49	167	622	831	474

✧Multiplication Fact Practice✧

Practice Set B for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this section.

4	7	8	4	7	9	9
× 5	× 3	× 7	× 4	× 4	× 3	× 5
20	21	56	16	28	27	45
8	9	3	6	3	4	
× 5	× 4	× 3	× 6	× 5	× 9	
40	36	9	36	15	36	
5	5	3	4	7	3	5
× 8	× 9	× 9	× 7	× 8	× 7	× 4
40	45	27	28	56	21	20

Lesson Practice

1. Diego decided to walk to his grandparents' house. He left at 8:45 AM and arrived at his grandparents' at 11:20 AM.

   How long did his walk take? Use the T-Chart below to find the answer.

Time	Interval
8:45 AM	
9:45 AM	1 hour
10:45 AM	1 hour
11:20 AM	+ 35 minutes

2 hours 35 minutes

2. Next, Diego took his horse, Snickers, out for some exercise. They left the stable at 12:50 PM and returned at 4:38 PM.

   How long was their ride? Use the Z-Chart below to find out.

12:50 PM — 10 minutes — 1:00 PM
3 hours
4:00 PM — 38 minutes — 4:38 PM

3 hours 48 minutes

3. That evening Diego drove to a pizza place to eat dinner. He left his house at 5:36 PM and returned at 7:12 PM.

   How long was he gone? Use either method.

5:36 PM — 24 minutes — 6:00 PM
1 hour
7:00 PM — 12 minutes — 7:12 PM

1 hour 36 minutes

4. Diego went to an airport to have a flying lesson. His plane took off at 9:10 AM and landed at 11:25 AM.

   How long was his flight? Use either method.

Time	Interval
9:10 AM	
10:10 AM	1 hour
11:10 PM	1 hour
11:25 PM	15 minutes

2 hours 15 minutes




Review

1. Use mental math strategies to find the answers.

46 - 22 = 24 84 - 57 = 27 32 - 15 = 17

2. Divide and shade each shape to match the fraction listed.

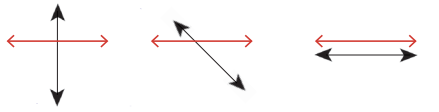
$\frac{3}{4}$ 
$\frac{5}{8}$ 
$\frac{1}{2}$ 

3. What fraction of BOOKKEEPER is the letter E? $\frac{3}{10}$

4. What fraction of your family is older than 10? Answers may vary. Example: $\frac{2}{4}$

5. What fraction of Diego's modes of transportation on the previous page involved flying? $\frac{1}{4}$

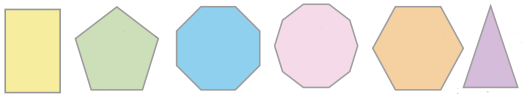
6. Draw a horizontal line through or next to each line below. On the lines below, write the type of lines you drew: parallel, perpendicular, or intersecting.



perpendicular intersecting parallel

MATH MYSTERIES
Who Am I?

Read the clues below to determine the mystery shape.



- I am not a decagon.
- I have no right angles.
- I am a regular polygon.
- I have an even number of sides.
- I have fewer than 8 obtuse angles.
- Who am I? hexagon

✧Multiplication Fact Practice✧

Practice Set B for 10 minutes. Then complete these problems.

4 × 7 = 28	9 × 3 = 27	5 × 8 = 40	3 × 9 = 27	4 × 9 = 36	8 × 8 = 64	3 × 7 = 21	8 × 5 = 40	4 × 4 = 16
8 × 7 = 56	9 × 5 = 45	7 × 3 = 21	7 × 8 = 56	5 × 9 = 45	6 × 4 = 24	4 × 5 = 20	9 × 4 = 36	5 × 4 = 20

Lesson Practice

1. Complete the addition problems.

487,675,012	8,241,765,132	219,518,264
+ 47,917,075	+ 684,179,542	+ 34,504,335
535,592,087	8,925,944,674	254,022,599

KOALA COUNTDOWN

PLATYPUS	381,957
ECHIDNA	307,165,195
DINGO	36,942
WOMBAT	23,671,498
KOOKABURRA	1,655,954,203
KANGAROO	49,827,590
KOALA	73,941

2. How many koalas and platypuses are there altogether? Show your work in the box to the right.

73,941
+ 381,957
455,898

3. How many echidnas are there, rounded to the nearest million?

307,000,000

4. How many kookaburras are there, rounded to the nearest hundred million?

1,700,000,000

5. Which animal has a population of fifty million when rounded to the nearest ten million?

kangaroo

6. When added together, are there more kangaroos and dingoes or wombats and platypuses?

49,827,590 kangaroos + 36,942 dingos = 49,864,532

23,671,498 wombats + 381,957 platypuses = 24,053,455

7. Using the chart, come up with your own addition problem and have your parent or teacher complete it.

Answers may vary. Example:

How many koalas and echidnas are there in total?

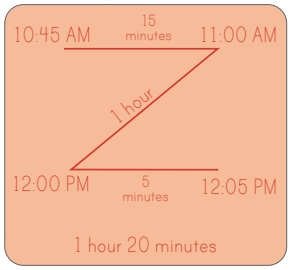
Review

1. At 8:38 AM you started your math homework, and you finished at 10:45 AM. How long did it take you?

Time	Interval
8:38 AM	
9:38 AM	1 hour
10:38 AM	1 hour
10:45 AM	7 minutes

2 hours 7 minutes

2. Once you finished your math homework, you started reading a book for history. You read until 12:05 PM. How long did you read?



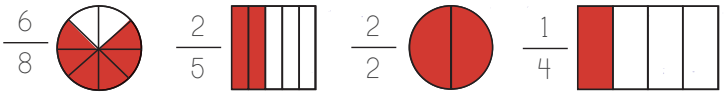
1 hour 20 minutes

3. Use mental math strategies to find the answers.

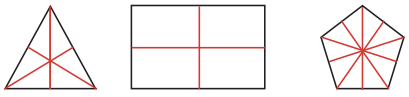
46 - 22 = 24 84 - 57 = 27 32 - 15 = 17

4. Divide and shade each shape to match the fraction listed.

$\frac{6}{8}$ $\frac{2}{5}$ $\frac{2}{2}$ $\frac{1}{4}$



5. Draw a line of symmetry through each polygon. Which polygons have more than one line of symmetry? triangle, rectangle, pentagon



✧Multiplication Fact Practice✧

Practice Set B for 10 minutes. Then complete the problems.

8 × 8 = 64	9 × 4 = 36	5 × 8 = 40	8 × 4 = 32	4 × 9 = 36	4 × 7 = 28	3 × 7 = 21	8 × 5 = 40	4 × 4 = 16	7 × 4 = 28
8 × 7 = 56	9 × 5 = 45	3 × 9 = 27	7 × 8 = 56	5 × 9 = 45	9 × 3 = 27	4 × 5 = 20	9 × 9 = 81	5 × 4 = 20	7 × 3 = 21

Lesson Practice

1. Complete the subtraction problems by regrouping.

500,000 − 137,573 = 362,427	7,000,000 − 3,280,982 = 3,719,018
800,000 − 249,604 = 550,396	3,000,000 − 746,203 = 2,253,797

2. Chris completed the problem below, but the answer isn't right. Can you spot his mistake? Once you find it, fix the mistake to get the correct answer.

9 9 9 9 9 — Should be a 10 not a 9 here.
3 10 10 10 10 10
4 0 0, 0 0 0
− 2 6 7, 5 2 3
1 3 2, 4 7 6

4 0 0, 0 0 0
− 2 6 7, 5 2 3
1 3 2, 4 7 7

3. Martha lives on a dairy farm and has her own milk cow named Daisy. Daisy produced 3,057 cups of milk this month. Martha's family drinks 1,237 cups, so Martha can sell the remaining cups of milk at the farmers market. How many cups of milk will Martha have to sell?

3,057
− 1,237
1,820

Optional challenge: Try using the Take One, Add One Strategy on scratch paper, if you want.

Review

1. Complete the addition problems, and then round the answers to the nearest hundred million.

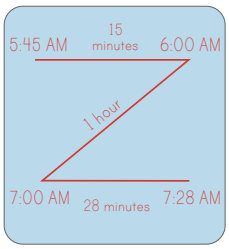
578,327,650 + 31,594,641 = 609,922,291	3,274,851,049 + 194,354,227 = 3,469,205,276
600,000,000	3,500,000,000

2. The farmers market opens at 8:15 AM. At 11:42 AM Martha sells the last carton of Daisy's milk. How long did it take her to sell all the milk?

Time	Interval
8:15 AM	
9:15 AM	1 hour
10:15 AM	1 hour
11:15 AM	1 hour
11:42 AM	27 minutes

3 hours 27 minutes

3. Each morning Martha helps her dad and mom milk the cows. They start at 5:45 AM and finish at 7:28 AM. How long does it take to milk the cows?



1 hour 43 minutes

4. Use mental math strategies to find the answers.

46 + 22 = 68 85 − 36 = 49

5. Draw and shade a shape to match each fraction listed.

$\frac{1}{8}$ $\frac{3}{5}$ $\frac{4}{4}$

6. Circle the letters that have parallel line segments.

A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z

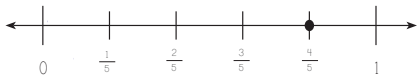
7. Underline the letters above that have perpendicular line segments.

✧Multiplication Fact Practice✧

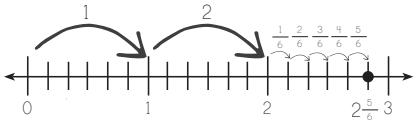
Practice Set B for 10 minutes. Then complete the problems.

9 × 4 = 36	4 × 4 = 16	9 × 5 = 45	4 × 5 = 20	9 × 3 = 27	7 × 3 = 21	8 × 7 = 56
7 × 4 = 28	8 × 5 = 40	6 × 6 = 36	6 × 4 = 24	3 × 4 = 12	8 × 0 = 0	5 × 4 = 20
5 × 9 = 45	3 × 7 = 21	4 × 9 = 36	4 × 7 = 28	7 × 8 = 56	3 × 9 = 27	5 × 8 = 40

Number lines can be used to show fractions and mixed numbers. The number line below is divided into 5 equal parts between 0 and 1, so each section represents $\frac{1}{5}$. To plot a fraction, we count the number of tick marks between two whole numbers. The fraction $\frac{4}{5}$ is shown on the number line below.



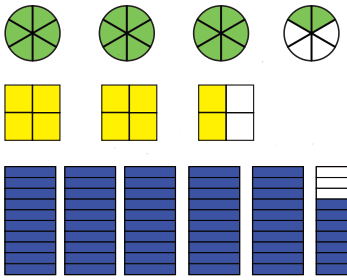
To plot a mixed number, we first count forward to the whole in the mixed number. Then we count the tick marks that represent the fraction. The mixed number $2\frac{5}{6}$ looks like this.



When we name a point marked on a number line, we count the number of wholes before the point. When naming the fractional part, we count the number of tick marks between the whole numbers. If there are 4 equal parts, each tick mark represents $\frac{1}{4}$. The point on the number line below is the mixed number $1\frac{1}{4}$.

Lesson Practice

1. Write the mixed number for each picture.



$3\frac{2}{6}$

$2\frac{2}{4}$

$5\frac{7}{10}$

2. Draw a picture for each mixed number. Use crayons or colored pencils if desired.

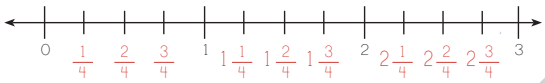
$3\frac{1}{8}$

$5\frac{2}{3}$

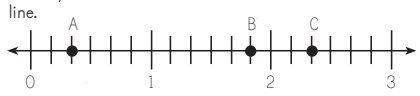
$2\frac{3}{6}$

Shapes may vary

3. Label each tick mark on the number line with the missing fractions and mixed numbers.

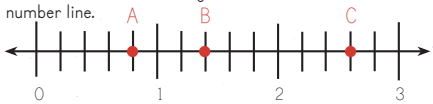


4. Identify the fraction and mixed numbers shown on the number line.



A = $\frac{2}{6}$ B = $1\frac{5}{6}$ C = $2\frac{2}{6}$

5. Plot and label the following fraction and mixed numbers on the number line.



A = $\frac{4}{5}$ B = $1\frac{2}{5}$ C = $2\frac{3}{5}$

Review

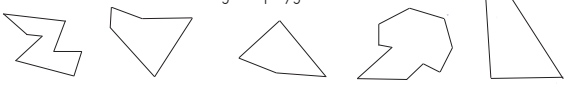
1. Complete the subtraction problems by regrouping.

500,000	9,000,000
- 487,306	- 2,816,342
12,694	6,183,658

2. Complete the addition problems, and then round the answers to the nearest million.

372,577,410	854,964,027
+ 12,847,925	+ 371,942,087
385,425,335	1,226,906,114
385,000,000	1,227,000,000

3. Write the names of the irregular polygons below.



Octagon Pentagon Quadrilateral Decagon Triangle

See the Reference Guide on page 394.

4. Continue the pattern. Hint: Pay attention to the difference between each number!

1, 2, 4, 7, 11, 16, 22, 29, 37, 46, 56

✧Multiplication Fact Practice✧

Practice Set B for 10 minutes. Then complete the problems.

4 × 7 = 28	9 × 3 = 27	5 × 8 = 40	3 × 9 = 27	4 × 9 = 36	8 ×10 = 80	3 × 7 = 21	8 × 5 = 40	4 × 4 = 16
8 × 7 = 56	9 × 5 = 45	7 × 3 = 21	7 × 8 = 56	5 × 9 = 45	6 × 4 = 24	4 × 5 = 20	9 × 4 = 36	5 × 4 = 20

Let's order these three numbers from greatest to least. All three numbers have equal digits in the hundred millions, ten millions, and millions places. When we look at the hundred thousands place, the third number has a greater digit than the other two numbers, so it is the largest number and we label it as number 1. We continue comparing the other two numbers. The first number has a greater digit in the thousands place, so it is the next largest and we label it as number 2. The remaining number is the least and is labeled number 3. We can then write them in order.

479,187,360 479,185,367 479,287,360

Numbers	Ordered from Greatest to Least
479,187,360 ⟶ 2 479,185,367 ⟶ 3 479,287,360 ⟶ 1	479,287,360 479,187,360 479,185,367

Lesson Practice

1. Circle the place value that determines which number is greater. The first one is done for you.

374,081,983 < 374,801,992 — Millions, (Hundred Thousands), Ten Millions

56,497,024 > 56,496,024 — (Thousands), Tens, Millions

278,037,917 < 278,037,927 — Ten Thousands, Hundred Millions, (Tens)

4,814,067 > 4,714,067 — Ones, Millions, (Hundred Thousands)

571,684,129 > 571,684,128 — Hundred Millions, Thousands, (Ones)

98,247,364 < 99,247,364 — (Millions), Hundred Thousands, Ten Millions

2. Compare the two numbers and fill in the <, >, or = symbol.

750,374,189 < 750,392,751

6,478,374 < 6,482,719

48,671,619 > 48,671,270

294,762,311 > 294,704,997

2,674,824 > 677,917

8,617,035 < 88,074,674

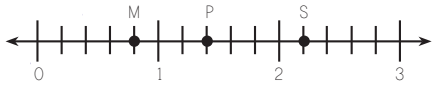
3. Order the chart from least to greatest.

POPULAR TOURIST DESTINATIONS	NUMBER OF VISITORS
Palace of Versailles (France)	5,978,579
Taj Mahal (India)	6,937,841
Great Barrier Reef (Australia)	5,978,049
Grand Canyon (USA)	6,734,247
Eiffel Tower (France)	6,934,571
Cologne Cathedral (Germany)	6,734,847

POPULAR TOURIST DESTINATIONS	NUMBER OF VISITORS
Great Barrier Reef (Australia)	5,978,049
Palace of Versailles (France)	5,978,579
Grand Canyon (USA)	6,734,247
Cologne Cathedral (Germany)	6,734,847
Eiffel Tower (France)	6,934,571
Taj Mahal (India)	6,937,841

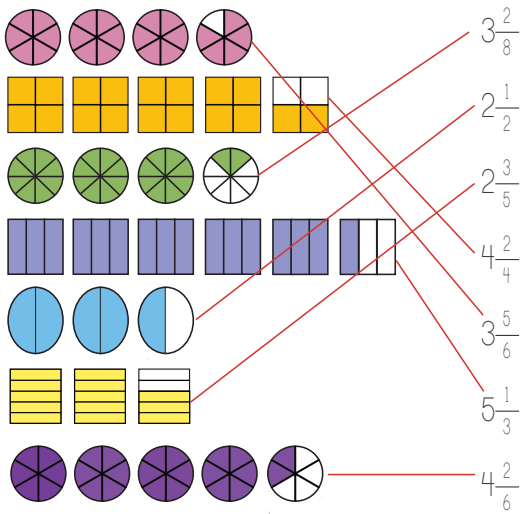
Review

1. Identify the fraction and mixed numbers shown on the number line.



M = $\frac{4}{5}$ P = $1\frac{2}{5}$ S = $2\frac{1}{5}$

2. Draw a line from the picture to its mixed number.



3. Complete the problems, and then round the answers to the nearest ten million.

600,000,000 − 78,346,917 = 521,653,083 → 520,000,000

574,691,204 + 169,371,025 = 744,062,229 → 740,000,000

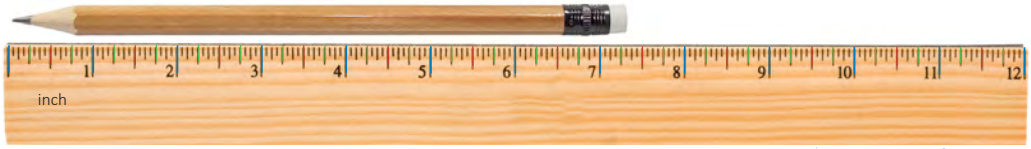
4. Continue the number pattern.

9, 12, 7, 10, 5, 8, 3, 6, 1

✧Multiplication Fact Practice✧

Practice Set B for 10 minutes. Then complete the problems.

5 × 9 = 45	4 × 4 = 16	5 × 4 = 20	4 × 9 = 36	3 × 7 = 21	3 × 9 = 27	4 × 7 = 28
7 × 8 = 56	5 × 8 = 40	3 × 5 = 15	5 × 5 = 25	4 × 8 = 32	9 × 5 = 45	8 × 7 = 56
4 × 5 = 20	9 × 4 = 36	8 × 5 = 40	7 × 3 = 21	9 × 3 = 27	7 × 4 = 28	8 × 2 = 16



If we measure this pencil to the nearest **inch**, we look at the end of the pencil and determine which whole-inch tick mark is closest. The pencil is between 7 and 8 inches. It is closer to 7 inches because the end of the pencil is between 7 inches and $7\frac{1}{2}$ inches.

If we measure this pencil to the nearest **half inch**, we look at the end of the pencil and determine which half-inch tick mark is closest. This pencil is closer to the $7\frac{1}{2}$ inch mark because it is past the halfway point between 7 inches and $7\frac{1}{2}$ inches.

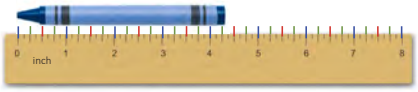
If we measure this pencil to the nearest **quarter inch**, we look at the end of the pencil and determine which quarter-inch tick mark is closest. This pencil is closest to $7\frac{1}{4}$ inches.

Measured to the nearest

Inch: 7 inches
Half inch: $7\frac{1}{2}$ inches
Quarter inch: $7\frac{1}{4}$ inches

Lesson Practice

1. On the ruler below, trace the inch lines in blue, the half-inch lines in red, and the quarter-inch lines in green.

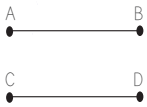


2. Using the ruler above, measure the length of the crayon to the following units:

Nearest inch 4 inches Nearest half inch $4\frac{1}{2}$ in

3. Find an object in your house that measures between 5 and 9 inches. Show your parent or teacher and write the name of the object and its measurement. Answers will vary.

4. A line segment is named by its two endpoints.



This is line segment AB or BA. We write it like this: $\overline{AB}$ or $\overline{BA}$.

What is the name of this line segment?

$\overline{CD}$ or $\overline{DC}$

5. Using a 12-inch ruler, measure the following line segments on the line below to the nearest quarter inch.

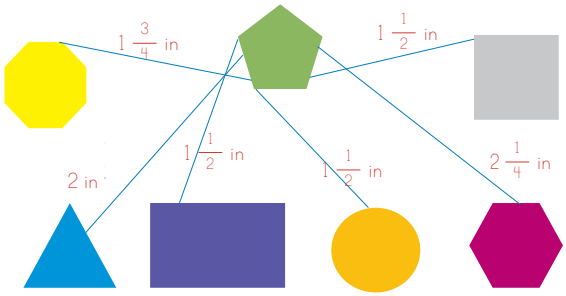
$\overline{AE}$ $3\frac{1}{2}$ in

Hint: Put the first line of your ruler on point A and measure the distance between point A and point E.

$\overline{BD}$ $2\frac{1}{4}$ in $\overline{CE}$ $1\frac{3}{4}$ in $\overline{AB}$ $\frac{1}{2}$ in

6. Label the inch scale below with the missing half-inch and quarter-inch measurements.

7. Measure each line segment from the pentagon to the other shapes to the nearest quarter inch. Write the measurement on each line. Which shape is farthest away? hexagon



HOW TALL ARE YOU?

Today, you will try an interesting activity to estimate your height in inches. First, you will need to carefully trace your hand on the next page.

Use your ruler to measure your hand from the very bottom of your hand to the top of your middle finger, to the nearest inch.

To find out your approximate height, multiply the length of your hand by 10. Answers will vary.

Hand = ____ inches × 10 = ____

Since we are rounding to the nearest inch, your height will be an estimate and not an exact measurement. Do you want to get an even closer estimate to your actual height? Try measuring your hand to the nearest half inch or quarter inch and multiplying it by 10. Use a calculator if you need help.

☑ Multiplication Fact Quiz ☑

Have your parent or teacher quiz you on the Set B multiplication facts below and circle any facts you missed. You will be doing targeted practice on these facts for the next few lessons.

4 × 4 = 16	4 × 5 = 20	7 × 3 = 21	7 × 4 = 28	8 × 5 = 40	8 × 7 = 56	9 × 3 = 27	9 × 4 = 36	9 × 5 = 45	5 × 4 = 20	4 × 9 = 36	3 × 7 = 21	5 × 8 = 40	5 × 9 = 45	4 × 7 = 28	3 × 9 = 27	7 × 8 = 56

All done! No review.

Goin' Fishing

You joined the crew on a fishing boat. Use the chart to calculate your catch.

NUMBER OF FISH CAUGHT	
SALMON	357,246
MACKEREL	1,545,037
HERRING	671,384
FLOUNDER	27,857
SARDINE	4,264,720
STURGEON	851,379

1. About how many fish did you catch if you caught both the mackerel and the salmon? Round to the nearest hundred thousand and estimate.

   1,500,000
   + 400,000
   1,900,000

2. About how many more sturgeon than herring did you catch? Round to the nearest ten thousand and estimate.

   850,000
   - 670,000
   180,000

3. About how many fish did you catch if you caught both the sturgeon and the herring? Round to the nearest hundred thousand and estimate.

   900,000
   + 700,000
   1,600,000

4. About how many more salmon than flounder did you catch? Round to the nearest ten thousand and estimate.

   360,000
   - 30,000
   330,000

5. About how many fish did you catch if you caught both the mackerel and the sardine? Round to the nearest million and estimate.

   2,000,000
   + 4,000,000
   6,000,000

Review

1. On the ruler above, draw a dot to indicate each measurement below.

   A) $2\frac{1}{2}$ in B) $4\frac{3}{4}$ in C) $\frac{1}{4}$ in D) 10 in

2. Using the ruler above, measure the length of the pencil to the following:

   Nearest inch 8 in Nearest quarter inch $8\frac{1}{4}$ in

3. Compare the numbers and fill in the <, >, or = symbol.

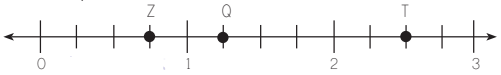
   4,374,651 > 4,372,048 | 7,852,349 > 7,852,249

4. Put these numbers in order from greatest to least.

   979,168
   1,274,058
   974,387
   1,274,054
   984,387

   1,274,058
   1,274,054
   984,387
   979,168
   974,387

5. Identify the fraction and mixed numbers shown on the number line.



Q = $1\frac{1}{4}$ T = $2\frac{1}{2}$ Z = $\frac{3}{4}$

6. The fishing boat leaves the harbor at 4:37 AM. The boat returns to the harbor at 10:12 AM with a full load of fish. How long did it take the boat to complete its trip? Use the box on the right.

Time	Interval
4:37 AM	
9:37 AM	5 hours
10:00 AM	23 minutes
10:12 AM	12 minutes

5 hours 35 minutes

7. Complete.

   400,000,000
   - 227,316,643
   172,683,357

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set B quiz in Lesson 23. Then complete the problems.

5 × 8 = 40	4 × 4 = 16	9 × 5 = 45	8 × 5 = 40	4 × 5 = 20	9 × 4 = 36	7 × 3 = 21	8 × 7 = 56	9 × 3 = 27
5 × 1 = 5	7 × 4 = 28	5 × 4 = 20	5 × 9 = 45	3 × 7 = 21	4 × 9 = 36	4 × 7 = 28	3 × 9 = 27	7 × 8 = 56

Lesson Practice

Your vacation starts in the US state of Arizona at the Grand Canyon, one of the most popular tourist sites in the world. From there you fly to Peru. Your flight leaves at 3:28 PM. What time will you arrive?

9:45 PM

After touring Machu Picchu, which is perched on a mountain at 7,000 feet in elevation, you board a plane to fly to Switzerland. You arrive in Switzerland at 11:51 PM. What time did your flight leave?

1:17 PM

After standing in the shadow of the mighty Matterhorn, it's time to continue on to China. Your plane takes off at 2:42 AM. What time will you arrive?

11:31 AM

Standing on the Great Wall of China, which is more than 2,000 years old, was amazing. Now you are off to Australia. You arrive at 9:34 PM. What time did your flight leave?

2:28 PM

After snorkeling in the Great Barrier Reef, you have a choice to make. Will the last stop on your trip be the Taj Mahal in India, the Great Pyramid of Giza in Egypt, or Victoria Falls in Zambia? You choose! Your flight leaves at 1:06 AM. What time will you arrive at your last stop?

India - 6:27 AM
Egypt - 9:19 AM
Zambia - 10:48 AM

Review

1. Complete the problems.

800,000,000	346,702,647
- 378,346,917	+ 276,671,507
421,653,083	623,374,154

2. Round the numbers to the nearest ten million and estimate the answer. Then complete the problem to see how close the estimate is.

46,393,753	50,000,000
+ 23,723,066	+20,000,000
70,116,819	70,000,000

3. Compare the numbers and fill in the <, >, or = symbol.

1,357,875 > 1,357,695

37,671,204 < 37,678,374

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set B quiz in Lesson 23. Then complete the problems.

7 × 8 = 56	4 × 4 = 16	9 × 5 = 45	5 × 8 = 40	5 × 4 = 20	4 × 9 = 36	3 × 7 = 21	8 × 7 = 56
9 × 3 = 27	4 × 5 = 20	7 × 3 = 21	4 × 7 = 28	3 × 9 = 27	9 × 4 = 36	7 × 4 = 28	8 × 5 = 40

Multiplication Pollination

42 × 2 = 84	23 × 3 = 69	19 × 5 = 95	60 × 4 = 240	32 × 8 = 256	41 × 9 = 369	28 × 8 = 224

134 × 2 = 268	362 × 5 = 1,810	493 × 4 = 1,972	271 × 3 = 813	604 × 6 = 3,624	397 × 3 = 1,191

1,204 × 2 = 2,408	3,641 × 4 = 14,564	5,432 × 5 = 27,160	7,260 × 3 = 21,780

Review

1. Oliver and his family are visiting a local fruit farm to pick their own strawberries. They started picking berries at 2:37 PM. It took them 3 hours and 23 minutes to fill up their baskets. What time did they finish picking strawberries?

Time	Interval
2:37 PM	
5:37 PM	3 hours
6:00 PM	23 minutes

2. Round the numbers to the nearest million and estimate the answer. Then complete the problem to see how close your estimate is.

6,349,123 − 3,603,876 = 2,745,247

6,000,000 − 4,000,000 = 2,000,000

3. Bryan completed the addition problem below. Round the numbers to the nearest hundred thousand and estimate the answer. Based on your estimated answer, is Bryan's answer likely right or wrong?

2,631,049 + 1,282,437 = 4,913,486

2,600,000 + 1,300,000 = 3,900,000

Likely wrong

4. Measure the carrot to the nearest half inch. 4 inches

5. Compare the numbers and fill in the <, >, or = symbol.

2,349,105 > 2,341,048 | 13,452,349 < 13,452,357

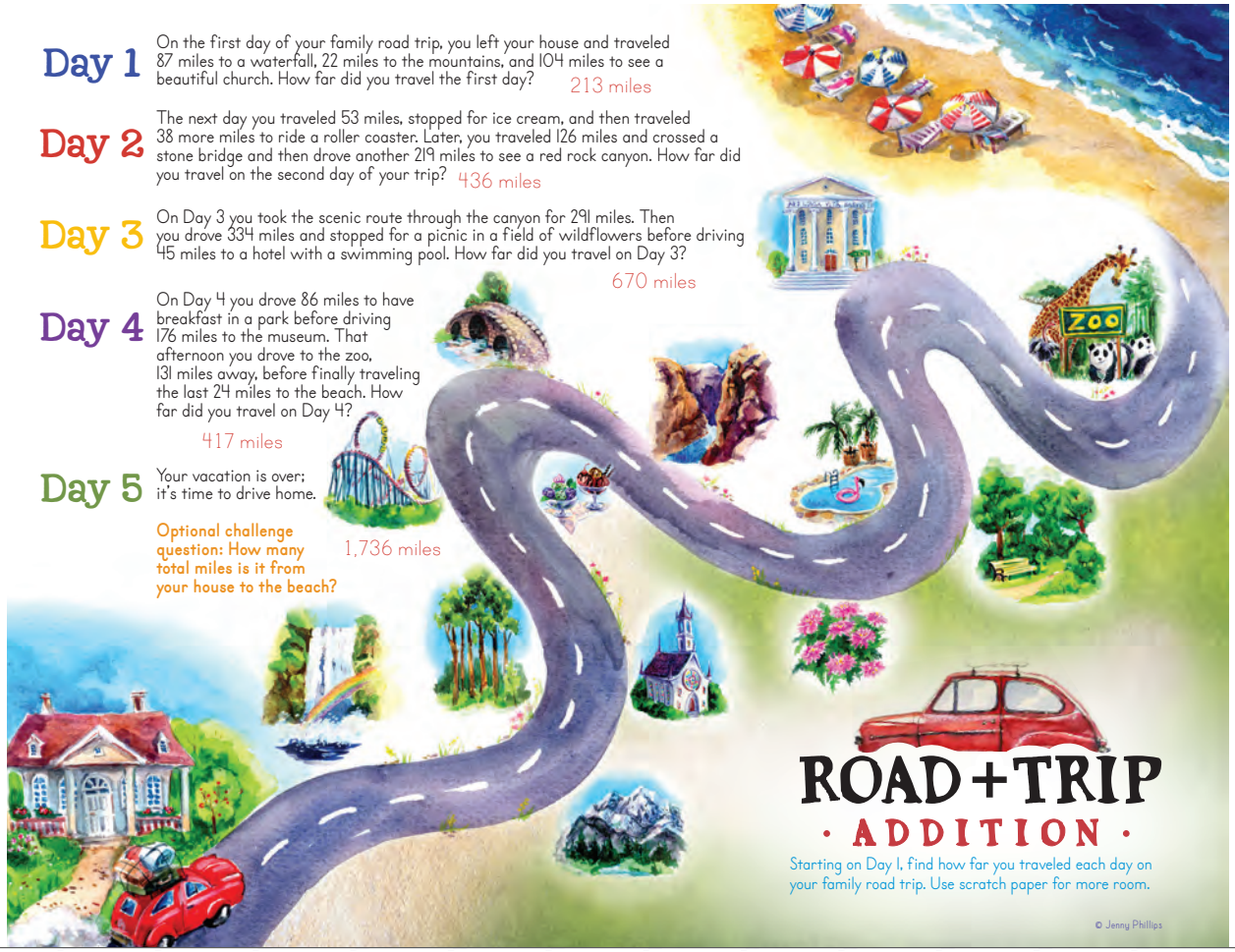
6. Label these mixed numbers on the number line.

$D = 2\frac{2}{4}$ $L = 1\frac{3}{4}$ $W = \frac{4}{4}$

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set B quiz in Lesson 23. Then complete the problems.

5 × 8 = 40	4 × 4 = 16	9 × 5 = 45	8 × 5 = 40	4 × 5 = 20	9 × 4 = 36	7 × 3 = 21	8 × 7 = 56	9 × 3 = 27
6 × 6 = 36	7 × 4 = 28	5 × 4 = 20	5 × 9 = 45	3 × 7 = 21	4 × 9 = 36	4 × 7 = 28	3 × 9 = 27	7 × 8 = 56



ROAD+TRIP · ADDITION ·

Starting on Day 1, find how far you traveled each day on your family road trip. Use scratch paper for more room.

Day 1 On the first day of your family road trip, you left your house and traveled 87 miles to a waterfall, 22 miles to the mountains, and 104 miles to see a beautiful church. How far did you travel the first day? 213 miles

Day 2 The next day you traveled 53 miles, stopped for ice cream, and then traveled 38 more miles to ride a roller coaster. Later, you traveled 126 miles and crossed a stone bridge and then drove another 219 miles to see a red rock canyon. How far did you travel on the second day of your trip? 436 miles

Day 3 On Day 3 you took the scenic route through the canyon for 291 miles. Then you drove 334 miles and stopped for a picnic in a field of wildflowers before driving 45 miles to a hotel with a swimming pool. How far did you travel on Day 3? 670 miles

Day 4 On Day 4 you drove 86 miles to have breakfast in a park before driving 176 miles to the museum. That afternoon you drove to the zoo, 131 miles away, before finally traveling the last 24 miles to the beach. How far did you travel on Day 4? 417 miles

Day 5 Your vacation is over; it's time to drive home. 1,736 miles

Optional challenge question: How many total miles is it from your house to the beach?

Review

1. Complete the problems.

67 × 2 = 134	460 × 6 = 2,760	4,351 × 5 = 21,755	2,694 × 2 = 5,388

2. Jada is flying to Oklahoma to visit her grandparents' farm for the summer. Her flight leaves at 2:05 PM and lands in Oklahoma City at 6:39 PM. How long is the flight?

Time	Interval
2:05 PM	
6:05 PM	4 hours
6:39 PM	34 minutes

4 hours 34 minutes

3. Booker is helping with the food at his church's annual picnic. Last year 8,426 adults and 12,574 children attended. If they have the same attendance this year, about how many people will come? Round the numbers to the nearest thousand and estimate.

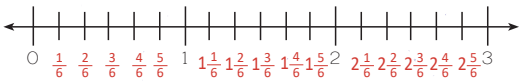
8,000
+ 13,000
21,000 people

4. Write a multiplication and a division equation for the array to the right.

3 × 4 = 12 or 4 × 3 = 12

12 ÷ 3 = 4 or 12 ÷ 4 = 3

5. Label the number line with the missing fractions and mixed numbers.



6. On the number line above, use a ruler to measure the distance between the 0 tick mark and the 3 tick mark to the nearest inch.

4 inches

7. Use the clues to determine the mystery number.

~~27~~ ~~8~~ ~~34~~ ~~43~~ ~~44~~ ~~50~~ ~~99~~ (62) ~~73~~

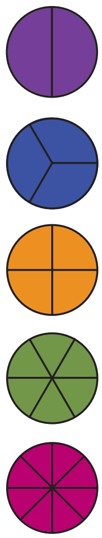
I am not the number to the left of 8. I am not the number to the right of 62. I am not an odd number. I am a two-digit number. I am greater than 40. The sum of my digits is 8. Rounded to the nearest ten, I am 60. What number am I?

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set B quiz in Lesson 23. Then complete the problems.

5 × 8 = 40	4 × 4 = 16	9 × 5 = 45	8 × 5 = 40	4 × 5 = 20	9 × 4 = 36	7 × 3 = 21	8 × 7 = 56	9 × 3 = 27
6 × 6 = 36	7 × 4 = 28	5 × 4 = 20	5 × 9 = 45	3 × 7 = 21	4 × 9 = 36	4 × 7 = 28	3 × 9 = 27	7 × 8 = 56

Fractions can name whole numbers, too. All the parts together of each circle below make up a whole. Examples of fractions that name one whole are two-halves, three-thirds, four-fourths, and five-fifths. If the numerator and the denominator are the same, the fraction is equal to 1.



$\frac{2}{2} = 1$

$\frac{3}{3} = 1$

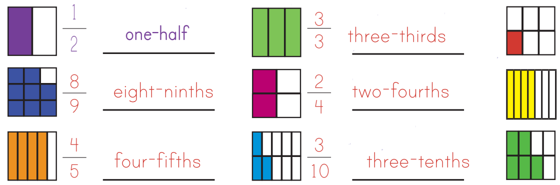
$\frac{4}{4} = 1$

$\frac{6}{6} = 1$

$\frac{8}{8} = 1$

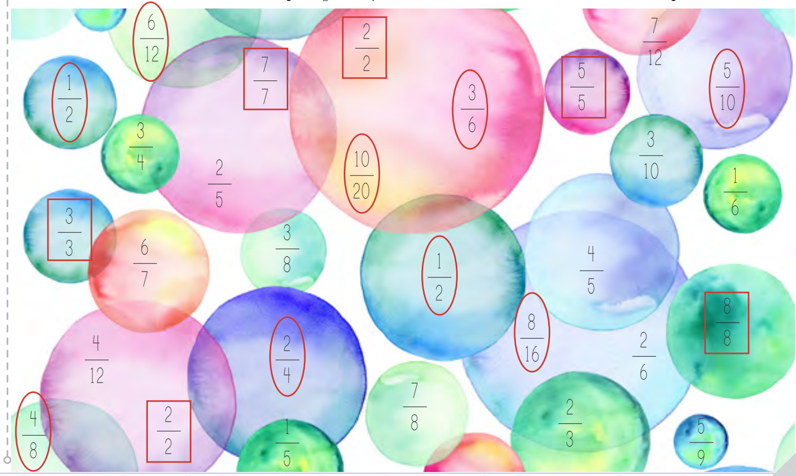
Lesson Practice

1. Fill in the missing information. The first has been done for you.



Fraction	Name	Fraction	Name	Fraction	Name
$\frac{1}{2}$	one-half	$\frac{3}{3}$	three-thirds	$\frac{1}{6}$	one-sixth
$\frac{8}{9}$	eight-ninths	$\frac{2}{4}$	two-fourths	$\frac{4}{7}$	four-sevenths
$\frac{4}{5}$	four-fifths	$\frac{3}{10}$	three-tenths	$\frac{5}{8}$	five-eighths

2. Circle all the fractions that equal $\frac{1}{2}$ and put a box around all the fractions that equal 1.



Complete the problems below to find the answer to the riddle.

3. Fill in the numerator for each fraction to make it equal to $\frac{1}{2}$.

$\frac{4}{8}$	$\frac{2}{4}$	$\frac{3}{6}$	$\frac{5}{10}$	$\frac{1}{2}$	$\frac{6}{12}$	$\frac{9}{18}$
M	L	E	G	I	U	D

4. Fill in the denominator for each fraction to make it equal to $\frac{1}{2}$.

$\frac{16}{32}$	$\frac{7}{14}$	$\frac{12}{24}$	$\frac{8}{16}$	$\frac{11}{22}$	$\frac{10}{20}$	$\frac{15}{30}$
F	O	Y	T	B	N	A

5. Fill in the numerator for each fraction to make it equal to 1.

$\frac{8}{8}$	$\frac{13}{13}$	$\frac{6}{6}$	$\frac{10}{10}$	$\frac{2}{2}$	$\frac{12}{12}$	$\frac{17}{17}$
R	C	H	P	S	V	J

Why was the math book sad?

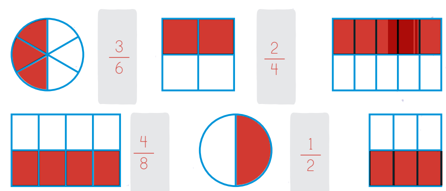
B E C A U S E   I T   H A D

$\frac{11}{22}$ $\frac{3}{6}$ $\frac{13}{13}$ $\frac{15}{30}$ $\frac{6}{12}$ $\frac{2}{2}$ $\frac{3}{6}$ $\frac{1}{2}$ $\frac{8}{16}$ $\frac{6}{6}$ $\frac{15}{30}$ $\frac{9}{18}$

S O   M A N Y   P R O B L E M S

$\frac{2}{2}$ $\frac{7}{14}$ $\frac{4}{8}$ $\frac{15}{30}$ $\frac{10}{20}$ $\frac{12}{24}$ $\frac{10}{10}$ $\frac{8}{8}$ $\frac{7}{14}$ $\frac{11}{22}$ $\frac{2}{4}$ $\frac{3}{6}$ $\frac{4}{8}$ $\frac{2}{2}$

6. Shade half of each shape, and then write the fraction that the shaded part represents next to each shape. shaded portions may vary



$\frac{3}{6}$ $\frac{2}{4}$ $\frac{5}{10}$

$\frac{4}{8}$ $\frac{1}{2}$ $\frac{3}{6}$

7. Write the number form of the fractions listed below.

seven-tenths $\frac{7}{10}$ four-ninths $\frac{4}{9}$ two-sixths $\frac{2}{6}$

eleven-sixteenths $\frac{11}{16}$ three-thirds $\frac{3}{3}$

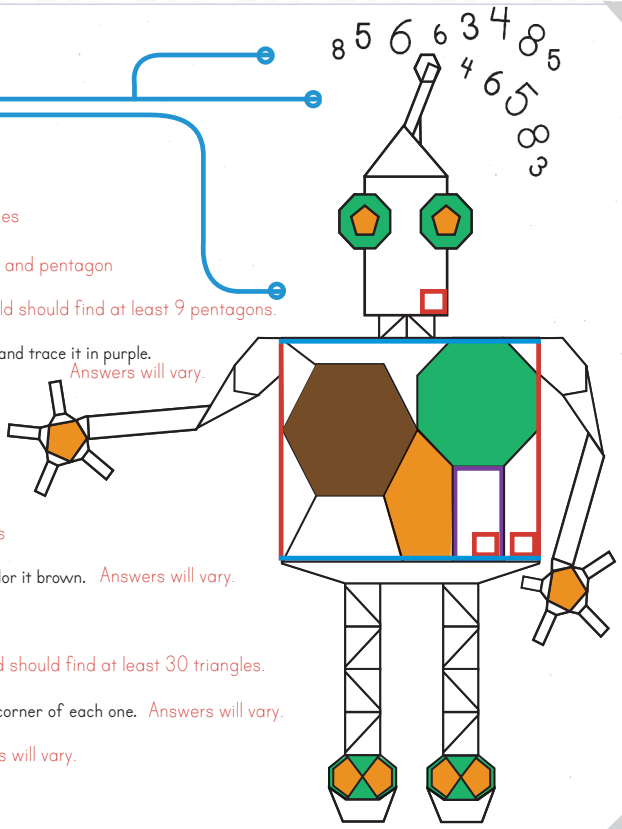
five-eighths $\frac{5}{8}$ ten-fifteenths $\frac{10}{15}$ eight-elevenths $\frac{8}{11}$

Read with your parent or teacher

It's time to take your next Multiplication Mastery Assessment. Have your parent or teacher quiz you on Multiplication Set B using the Multiplication Mastery Chart on page 395.

Parent/Teacher: Indicate which facts from Set B the student has mastered in the "Mastered" column on page 395. The student will continue to review and practice these facts throughout the course.

ROBOT REVIEW



- How long are the robot's legs to the nearest inch? 2 inches
- Which two polygons make up the robot's eyes? octagon and pentagon
- How many pentagons can you find on the robot? The child should find at least 9 pentagons.
- Find a polygon on the robot made up of four right angles and trace it in purple. Answers will vary.
- Color five octagons green. Answers will vary.
- Find and trace a pair of vertical parallel lines in red. Answers will vary.
- Which four polygons make up the robot's feet? octagon, pentagon, triangle, hexagon
- How tall is the robot to the nearest half inch? 6.5 inches
- Find a polygon on the robot with six obtuse angles and color it brown. Answers will vary.
- Color nine pentagons orange. Answers will vary.
- How many triangles did you find on the robot? The child should find at least 30 triangles.
- Find three right angles and draw a small square in the corner of each one. Answers will vary.
- Trace a pair of horizontal parallel lines in blue. Answers will vary.

LESSONS 29-30

UNIT ASSESSMENT

Supplies
12-inch ruler

Parent/Teacher

Read the following information aloud to the child: Unit assessments give you practice with the mathematical concepts learned in this course without having you overpractice concepts that you have mastered. These assessments also give you practice working on exercises for an extended period of time. This helps you to extend your 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 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. And finally, if you feel you are having trouble focusing, take a quick break to do something else, like ten jumping jacks. There are no videos for Lessons 29–30.

For Lesson 29 complete all the exercises with PURPLE headers ONLY. Your parent or teacher will correct the work. If you make one or more mistakes in a section, your parent or teacher will check the orange "Additional Practice" checkbox for that section.

For Lesson 30 complete all the orange sections **that are checked**. If you still miss multiple problems, go back and rewatch the video or reread the mini lesson for that topic. All the principles will be reviewed again in future units. If you have only a few or no orange sections to practice, you may move on to the next unit.

Student

READING SCALES & MEASURING
(LESSON 23)

1. Label the inch scale below with the missing half-inch and quarter-inch measurements.

2. Measure this line segment to the nearest quarter inch. $3\frac{3}{4}$ in

3. How long is the lollipop? $2\frac{1}{4}$ in

Additional Practice

1. Draw a line segment that is $2\frac{3}{4}$ inches long.

2. Measure the following line segment to the nearest inch.

3 in

3. Find an object in your house that measures between 3 inches and 4 inches. Show it to your parent or teacher.

Answers will vary.

ADDITION, SUBTRACTION & WRITING NUMBERS
(LESSONS 19 & 20)

1. Complete each problem.

7,000,000 − 5,347,501 = 1,652,499

32,461,084 + 41,372,407 = 73,833,491

172,681,364 + 441,132,737 = 613,814,101

20,000,000 − 8,274,391 = 11,725,609

2. Write the following numbers using digits.

Twenty-four million, six hundred seventy-two thousand, nine hundred thirty-one 24,672,931

Seven billion, three hundred nineteen million, nine hundred forty-six thousand, two hundred four 7,319,946,204

3. Write the following number using words.

357,618,452

three hundred fifty-seven million, six hundred eighteen thousand, four hundred fifty-two

Additional Practice

Use the chart to answer the following questions.

Object	Number
	48,304,971
	22,374,019
	60,000,000
	35,476,945

1. How many cacao beans are there? Write the number in word form.
thirty-five million, four hundred seventy-six thousand, nine hundred forty-five

2. How many rubber ducks and bees are there in total? 70,678,990

3. How many more bottles of milk are there than rubber ducks? 37,625,981

4. How many cacao beans and bees are there in total? 83,781,916

MULTIPLYING
(LESSONS 5 & 26)

3,193 × 3 = 9,579

144 × 2 = 288

3,425 × 5 = 17,125

439 × 4 = 1,756

6,072 × 3 = 18,216

834 × 2 = 1,668

3,492 × 9 = 31,428

460 × 6 = 2,760

Additional Practice

134 × 2 = 268

362 × 5 = 1,810

493 × 4 = 1,972

271 × 3 = 813

421 × 2 = 842

1,204 × 2 = 2,408

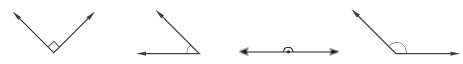
3,641 × 4 = 14,564

5,432 × 5 = 27,160

7,260 × 3 = 21,780

ANGLES
(LESSON 13)

Name the types of angles below.



Right Acute Straight Obtuse

Look at each angle measurement and match it with the angle type. Some angle types will match more than one measurement.

22° — acute
90° — right
141° — obtuse
69° — acute
180° — straight
102° — obtuse

Additional Practice

Label each clock with the type of angle formed by its hands.


Acute


Obtuse


Right


Straight


Acute


Obtuse

ELAPSED TIME
(LESSONS 18 & 25)

1. At 7:24 AM you started your math lesson. At 8:48 AM you finished the last problem. How long did the lesson take you to complete?

1 hour 24 minutes

2. Next, you started working on your science project. You started at 9:12 AM, and it took 2 hours and 7 minutes to complete. What time did you finish your science project?

11:19 AM

3. Mary and her family are driving from Kansas to Colorado. They leave at 7:35 AM and arrive at 11:23 AM. How long did the drive take?

3 hours 48 minutes

4. Takeshi ran in a race for a local charity. It took him 2 hours and 27 minutes to complete the race, and he finished at 4:38 PM. What time did the race start?

2:11 PM

Additional Practice

Fill in the missing start and end times for each flight. Show your work on a separate piece of paper.

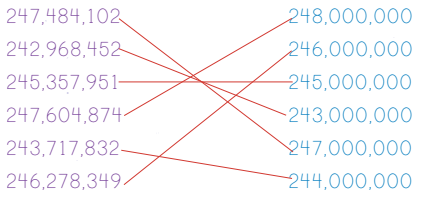
Destination	Start Time	Flight Duration	End Time
Hamburg, Germany	8:31 AM	3 hours 13 minutes	11:44 AM
Vancouver, Canada	2:36 PM	7 hours 39 minutes	10:15 PM
Nairobi, Kenya	1:50 PM	2 hours 52 minutes	4:42 PM
Nong Kai, Thailand	1:47 AM	8 hours 24 minutes	10:11 AM
Buenos Aires, Argentina	5:57 PM	2 hours 42 minutes	8:39 PM

PLACE VALUE & ROUNDING
(LESSONS 7, 11 & 19)

1. Round each number below to the place values indicated.

	Ten Thousands	Millions	Ten Millions
51,487,354	51,490,000	51,000,000	50,000,000
88,274,650	88,270,000	88,000,000	90,000,000
37,623,013	37,620,000	38,000,000	40,000,000
15,378,634	15,380,000	15,000,000	20,000,000

2. Match each number with its value rounded to the nearest million.



3. Circle the digit in the thousands place. Put a box around the digit in the ten millions place. Underline the digit in the hundred thousands place. Round the number to the hundred millions place.

3<u>4</u>7,6<u>1</u>2,8<u>5</u>4

300,000,000

Additional Practice

1. Round the number in red to each value listed in the chart.

347,612,854

round to the nearest 100,000	round to the nearest 1,000,000	round to the nearest 10,000,000	round to the nearest 100,000,000
347,600,000	348,000,000	350,000,000	300,000,000

2. Write the missing labels on the place value chart. Then write this number at the bottom of the chart: 841,067,247

Millions			Thousands			Ones		
Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
8	4	1	0	6	7	2	4	7

3. Round 37,691,452 to the nearest ten million.

40,000,000

4. Round 7,121,547 to the nearest hundred thousand.

7,100,000

5. Write the place value of each red digit.

4,874,352
thousands

271,684,025
ten millions

54,309,754
hundred thousands

GEOMETRIC FIGURES & POLYGONS (LESSONS 10 & 14)

Answers will vary.

1. Follow the directions.
   - Trace a horizontal line segment in green.
   - Trace a vertical line segment in red.
   - Trace an oblique line segment in blue.
   - Trace a pair of perpendicular line segments in yellow.
   - Trace a pair of parallel line segments in orange.
   - Trace a pair of intersecting line segments in purple.

2. Answer the questions by writing the names of the polygons shown above.

Which polygon has right angles? square

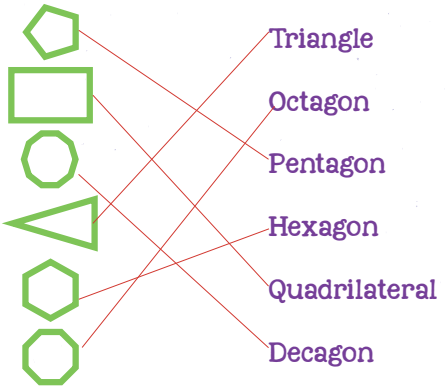
Which polygon has only acute angles? triangle

Which polygon has four sets of parallel lines? octagon

Which polygons are left? pentagon and hexagon

Additional Practice

1. Draw a line from each polygon to its name.



2. Use the clues to identify the mystery letter.

A M F L G X Z O H J T

I have no oblique line segments.

I have only straight line segments.

I have a set of parallel line segments.

I have a set of perpendicular line segments.

I have two horizontal line segments and one vertical line segment.

Which letter am I?

COMPARE, ORDER & ESTIMATE NUMBERS (LESSONS 22 & 24)

1. Grace completed the problem below. Round both numbers to the nearest ten thousand and estimate the answer. Based on your estimation, is Grace's answer likely right or wrong?

913413
~~833,349~~
- 344,917
690,432

840,000
- 340,000
500,000

likely wrong

2. Order the numbers below from greatest (on top) to least.

347,287,104	347,841,358
347,841,358	347,764,020
347,231,985	347,287,104
347,764,020	347,234,765
347,234,765	347,231,985

Additional Practice

1. Compare the two numbers and fill in the <, >, or = symbol.

39,715,624 < 39,717,842	2,629,374 < 2,629,719
84,617,619 > 84,617,270	492,726,311 < 492,746,997
2,674,824 > 677,917	3,374,035 < 21,379,674

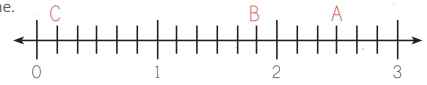
2. Round to the nearest hundred thousand and estimate the sum.

2,631,049
+ 1,282,437

2,600,000
+ 1,300,000
3,900,000

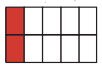
FRACTIONS & MIXED NUMBERS (LESSONS 15 & 21)

1. Plot and label the following mixed numbers and fraction on the number line.

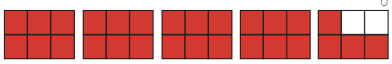


A = $2\frac{3}{6}$ B = $1\frac{5}{6}$ C = $\frac{1}{6}$

2. Divide and shade each shape to match the fraction listed.

$\frac{2}{4}$  $\frac{2}{3}$  $\frac{2}{8}$  $\frac{2}{10}$ 

3. Draw a picture to represent the mixed number $4\frac{4}{6}$.



Shapes will vary.

Additional Practice

1. Write the location of each point shown on the number line.

B = $2\frac{1}{4}$ K = $\frac{1}{4}$ T = $1\frac{3}{4}$

2. Draw a picture to represent the mixed number $2\frac{1}{4}$.

Shapes will vary.

Lesson Practice

CUSTOMARY = CONVERSIONS

Sometimes it is necessary to convert between units, especially when cooking or baking. When we are converting from a larger unit to a smaller unit, we multiply. When we are converting from a smaller unit to a larger unit, we divide.

Convert gallons to quarts.

2 gal = ___ qt

1. Choose the correct conversion.
   1 gal = 4 qt
2. Choose the correct operation.
   larger unit → smaller unit (×)
3. Multiply the number of gallons by the number of quarts in each gallon.
   2 gal × 4 qt in a gal = 8 qt

Convert cups to pints.

6 c = ___ pt

1. Choose the correct conversion.
   2 c = 1 pt
2. Choose the correct operation.
   smaller unit → larger unit (÷)
3. Divide the number of cups by the number of cups in a pint.
   6 c ÷ 2 c in a pt = 3 pt

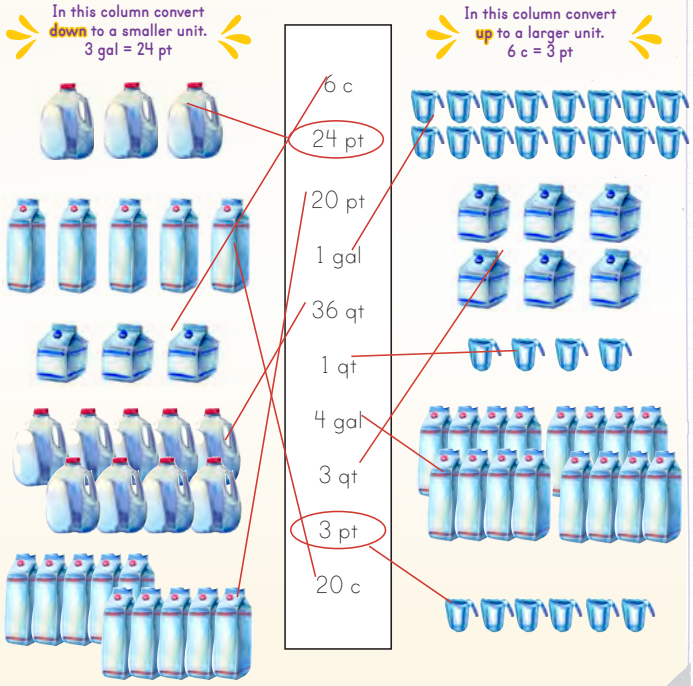
We can convert between teaspoons and tablespoons too.

1 tablespoon = 3 teaspoons

Connect each image with an equivalent conversion. Two have been done for you.

In this column convert **down** to a smaller unit.
3 gal = 24 pt

In this column convert **up** to a larger unit.
6 c = 3 pt



Review

✧ Multiplication Fact Practice ✧

Practice Set C for 10 minutes, and then complete the problems in this section.

8 × 6 = 48	7 × 9 = 63	3 × 6 = 18	8 × 3 = 24
5 × 6 = 30	8 × 9 = 72	6 × 9 = 54	5 × 7 = 35
1 × 6 = 6	7 × 0 = 0	10 × 6 = 60	8 × 2 = 16
5 × 3 = 15	8 × 8 = 64	7 × 3 = 21	8 × 7 = 56
2 × 11 = 22	7 × 6 = 42	6 × 7 = 42	7 × 7 = 49
3 × 8 = 24	6 × 3 = 18	9 × 7 = 63	6 × 8 = 48
7 × 5 = 35	9 × 6 = 54	6 × 5 = 30	9 × 8 = 72

1. Draw and shade four shapes that represent fractions equivalent to $\frac{1}{2}$.

   Answers will vary.

2. Draw a line segment that is three inches long.

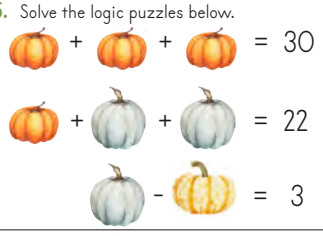
3. Divide the line segment you drew into three equal sections. How long is each section?

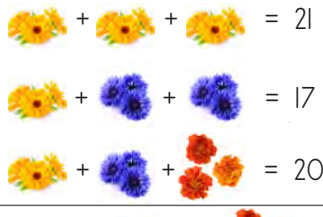
   1 inch

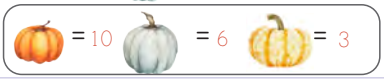
4. Complete each multiplication problem.

524 × 2 = 1,048	382 × 4 = 1,528	227 × 3 = 681	142 × 6 = 852	276 × 5 = 1,380	330 × 3 = 990	175 × 7 = 1,225	231 × 4 = 924

5. Solve the logic puzzles below.







When multiplying a number by 10,000, it becomes 10,000 times larger! For example, 2 × $10,000 is the same as 2 groups of $10,000.

$10,000 + $10,000 = $20,000

Ten Thousands	Thousands	Hundreds	Tens	Ones
				2
2	0,	0	0	0

The same mental math strategy can be applied to all of these problems.

2 × 10,000 = ?
2 × 1 = 2
2 × 10,000 = 20,000

12 × 100 = ?
12 × 1 = 12
12 × 100 = 1,200

47 × 1,000 = ?
47 × 1 = 47
47 × 1,000 = 47,000

80 × 10,000 = ?
80 × 1 = 80
80 × 10,000 = 800,000

Lesson Practice

Khalid Bashir and his family own a sporting goods store. Use the pictures of the products they sell to answer the following questions.

1. The Bashir family ordered 42 boats for their store. If they sell all of them, how much money will they earn?
   $420,000

2. A family came into the store and bought sneakers for all 12 of their children. How much will it cost for shoes for all the children?
   $1,200

3. Khalid stocked 64 sets of snowshoes on the shelves in the morning. After two days, all the snowshoes were sold. How much money did they make on snowshoes?
   $6,400

4. In the spring the store sells a lot of ATVs. In the month of May, 53 were sold. How much money was made in May from ATVs?
   $530,000

5. The local high school ordered 21 sets of golf clubs for the golf team. Khalid needs to send them a bill. How much will their total cost be?
   $21,000

6. A customer purchased 5 surfboards and 8 bicycles. How much will the customer pay? Find the price for each group of items, and then add the totals together.
   $5,800

Review

1. Complete each problem.

345 × 2 = 690	293 × 4 = 1,172	807 × 3 = 2,421
112 × 9 = 1,008	473 × 6 = 2,838	99 × 3 = 297
270 × 2 = 540	642 × 5 = 3,210	537 × 7 = 3,759

2. Gail is taking a bus tour of Glacier National Park. The tour leaves at 7:55 AM and returns at 11:13 AM. How long is the tour?

   3 hrs 18 min

3. Circle the fractions that are equivalent to $\frac{1}{2}$.

   $\frac{5}{8}$ $\frac{3}{6}$ $\frac{12}{24}$ $\frac{2}{5}$ $\frac{8}{16}$ $\frac{1}{3}$ $\frac{7}{10}$ $\frac{4}{8}$ $\frac{6}{12}$

4. Connie is making chicken noodle soup. She needs to add 2 gallons of chicken broth to the pot. How many cups of broth will she need to add to the pot to equal 2 gallons?
   32 cups

5. Ricky needs to bring 8 quarts of orange juice to the fundraiser. He has 28 cups right now. How many more cups of orange juice does he need?
   4 more cups

6. 16 pints = 8 quarts

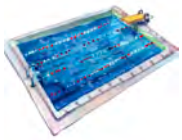
Multiplication Fact Practice

Practice Set C for 10 minutes, and then complete the problems in this section.

9 × 8 = 72	9 × 6 = 54	8 × 3 = 24	7 × 9 = 63	7 × 7 = 49	7 × 6 = 42	9 × 4 = 36	8 × 5 = 40	6 × 8 = 48	6 × 3 = 18	5 × 7 = 35	8 × 9 = 72
6 × 5 = 30	7 × 5 = 35	3 × 6 = 18	8 × 6 = 48	6 × 7 = 42	9 × 7 = 63	5 × 5 = 25	3 × 4 = 12	11 × 2 = 22	3 × 8 = 24	6 × 9 = 54	5 × 6 = 30

Lesson Practice

1. Would you use liters (L) or milliliters (mL) to measure the volume of each item below? Write L or mL on the line.


L


mL


mL


L

2. Convert from liters to milliliters.

8 L = 8,000 mL	17 L = 17,000 mL
55 L = 55,000 mL	3 L = 3,000 mL
12 L = 12,000 mL	98 L = 98,000 mL
1 L = 1,000 mL	26 L = 26,000 mL

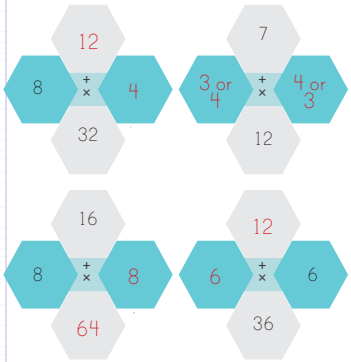
3. Convert from milliliters to liters.

3,000 mL = 3 L	48,000 mL = 48 L
14,000 mL = 14 L	1,000 mL = 1 L
77,000 mL = 77 L	9,000 mL = 9 L
2,000 mL = 2 L	36,000 mL = 36 L

4. Circle the greatest volume in each box.

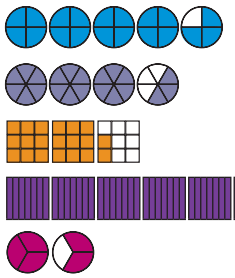
23 L, 7,000 mL, **54,000 mL**, 8 L	4,000 mL, **87 L**, 86,000 mL, 19 L
11,000 mL, 11 L, 1 L, **21 L**	45 L, **67,000 mL**, 12,000 mL, 63 L

1. In each shape the numbers in the blue hexagons added together will equal the number on the top and multiplied together will equal the number on the bottom. Use the numbers in each shape to figure out the missing numbers.



Review

2. Write a mixed number for each set of shaded shapes.



$4\frac{3}{4}$

$3\frac{3}{8}$

$2\frac{2}{5}$

$6\frac{4}{7}$

$1\frac{2}{3}$

3. Complete each problem.

1,317 × 6 = 7,902	433 × 5 = 2,165	2,530 × 2 = 5,060	629 × 4 = 2,516

4. With permission from your parent or teacher, you will do some real-life measuring. You need a one-cup measuring cup and a large bowl or pitcher.

- One at a time, carefully measure 2 cups of water into your bowl. How many pints are in your bowl? 1
- Now add 2 more cups of water for a total of 4 cups. How many pints are in your bowl now? 2 What other unit equals 4 cups? quart
- Add 4 more cups of water for a total of 8 cups. How many pints do you have? 4 How many quarts? 2
- How many more cups do you need to add to reach 1 gallon? 8 Go ahead and add those now.

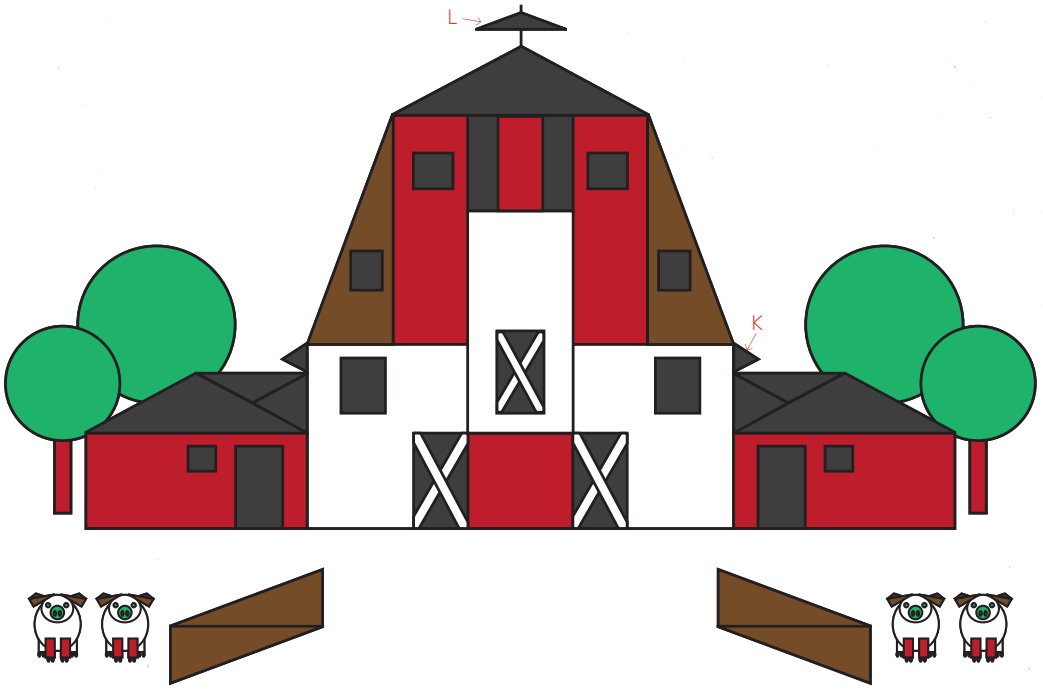
Multiplication Fact Practice

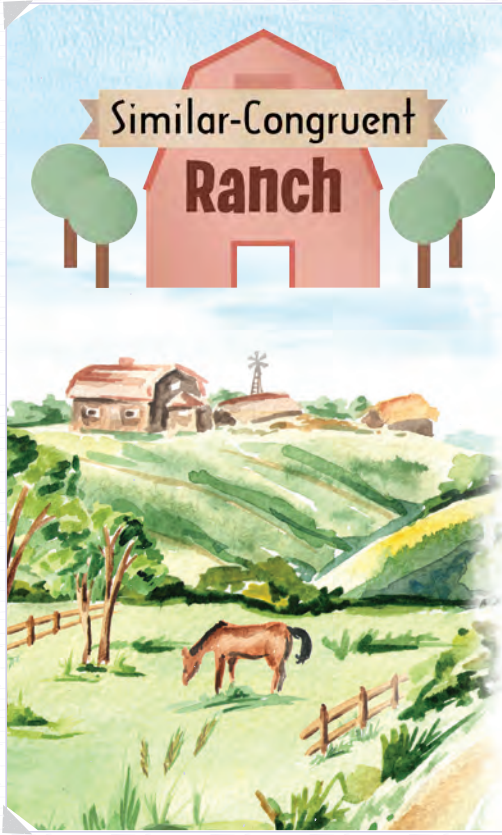
Practice Set C for 10 minutes, and then complete the problems in this section.

3 × 8 = 24	6 × 3 = 18	4 × 1 = 4	6 × 8 = 48
5 × 6 = 30	8 × 9 = 72	6 × 9 = 54	5 × 7 = 35
1 × 6 = 6	7 × 0 = 0	10 × 6 = 60	8 × 2 = 16
6 × 4 = 24	3 × 3 = 9	9 × 5 = 45	4 × 4 = 16
11 × 7 = 77	7 × 6 = 42	6 × 7 = 42	7 × 7 = 49
8 × 6 = 48	7 × 9 = 63	3 × 6 = 18	8 × 3 = 24
7 × 5 = 35	9 × 6 = 54	6 × 5 = 30	9 × 8 = 72

Lesson Practice

The ranch below has congruent and similar shapes hidden within the picture. Use the labeled shapes to answer the questions on the next page.





For each description below, write the answer on the line.

Name one rectangle that is congruent to door R.	W
Name two windows that are similar to B.	E, G, N, and S
Name one triangle congruent to triangle I.	D
Which two triangles on the barn door are congruent?	Y Z
Name a circle that is congruent to J.	P
How many shapes are congruent to D?	3
Name two triangles similar to L.	F, M, or A
Are C and T congruent?	yes
Name two rectangles that are similar to V.	U O
Which rectangle is congruent to window S?	E
Name two triangles that are similar to H.	Y, K, or Z
How many animals are congruent? What are they?	4 pigs
Which rectangle is congruent to X?	V
Are V and U congruent?	no
How many shapes are similar to Q?	3

Optional Coloring Extension:

Answers will vary. An example is shown.

Color triangles similar to triangle D brown.
Color labeled rectangles black.
Color any rectangles not labeled red.
Color all similar circles green.
Color triangles similar to triangles A and H black.
Color remaining shapes any color you want.

Review

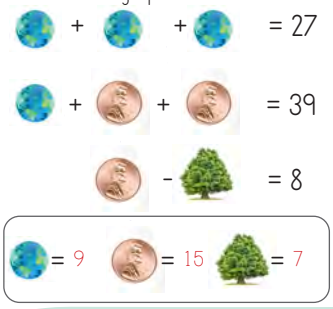
1. Complete each problem.

54 × 10,000 = 540,000

13 × 1,000 = 13,000

9 × 100 = 900

2. Solve the logic puzzle.



3. Fill in the missing information.

1 L = 1,000 mL

1 gal = 4 qt = 8 pt = 16 c

4. Circle the greatest volume in each box.

23 L	8,000 mL
34,000 mL	2 L

12 pt	1 gal
8 c	**7 qt**

2 gal	**16 qt**
26 c	4 pt

1 gal	16 c
4 qt	**10 pt**

5. Complete each problem.

2,420 × 7 = 16,940	573 × 4 = 2,292	3,644 × 3 = 10,932
935 × 5 = 4,675	4,307 × 6 = 25,842	519 × 1 = 519

Multiplication Fact Quiz

Have your parent or teacher quiz you on the Set C multiplication facts below and circle any facts you missed. You will be doing targeted practice on these facts for the next few lessons.

5 × 6 = 30	8 × 9 = 72	6 × 9 = 54	5 × 7 = 35	6 × 3 = 18	3 × 8 = 24	9 × 7 = 63	6 × 8 = 48	7 × 6 = 42	6 × 7 = 42	8 × 6 = 48	7 × 7 = 49	7 × 9 = 63	7 × 5 = 35	6 × 5 = 30	8 × 3 = 24	9 × 6 = 54	9 × 8 = 72	3 × 6 = 18

Lesson Practice

We can use multiplication to write equivalent fractions without using shapes.

$\frac{1}{3} = \frac{?}{6}$

To find a fraction equivalent to one-third with a denominator of 6, we determine what number we multiply 3 by to get 6, which is 2.

$\frac{1}{3} \overset{\times 2}{=} \frac{2}{6}$

Then we multiply the numerator by the exact same number. One-third is equivalent to two-sixths.

We can find equivalent fractions by multiplying the same fraction by different numbers. All of these fractions are equivalent to two-thirds.

$\frac{2}{3} \overset{\times 2}{=} \frac{4}{6}$ $\quad \frac{2}{3} \overset{\times 3}{=} \frac{6}{9}$

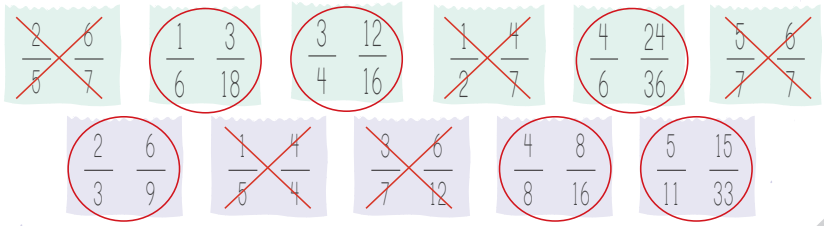
$\frac{2}{3} \overset{\times 4}{=} \frac{8}{12}$ $\quad \frac{2}{3} \overset{\times 5}{=} \frac{10}{15}$

1. Fill in the missing information. All of these fractions are equivalent to one-fifth.

$\frac{1}{5} \overset{\times 2}{=} \frac{2}{10}$ $\quad \frac{1}{5} \overset{\times 4}{=} \frac{4}{20}$ $\quad \frac{1}{5} \overset{\times 6}{=} \frac{6}{30}$ $\quad \frac{1}{5} \overset{\times 3}{=} \frac{3}{15}$

2. Write a fraction equivalent to $\frac{1}{3}$ on each cloud. Write a fraction equivalent to $\frac{1}{2}$ on each sun.

3. Circle the fraction pairs below that are equivalent. Put an X through the ones that are not equivalent.



Review

1. Complete each conversion.

7 L = 7,000 mL

8 qt = 2 gal

10 c = 5 pt

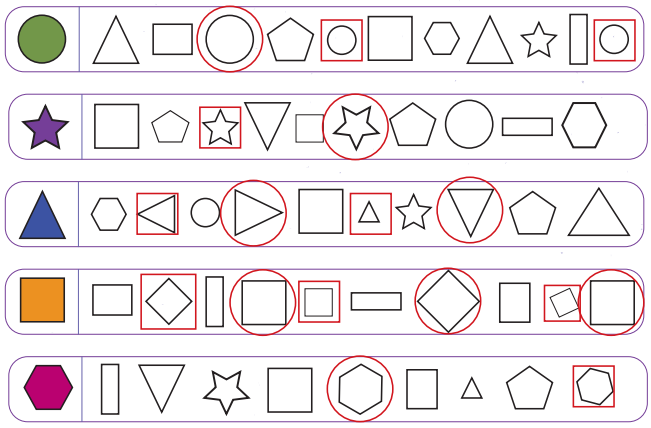
9,000 mL = 9 L

3 gal = 24 pt

12 qt = 48 c

15 L = 15,000 mL

2. For each row, circle all shapes that are congruent (same shape and size) to the first shape and put a box around all shapes that are similar (same shape) but not congruent.



Targeted Multiplication Fact Practice

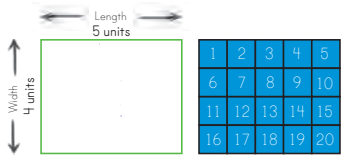
Practice any problems you missed in your Set C quiz in Lesson 34. Then complete the problems in this section.

9 × 8 = 72	9 × 6 = 54	8 × 3 = 24	7 × 9 = 63	7 × 7 = 49	7 × 6 = 42	9 × 4 = 36	9 × 3 = 27	6 × 8 = 48	6 × 3 = 18	5 × 7 = 35	8 × 9 = 72
6 × 5 = 30	7 × 5 = 35	3 × 6 = 18	8 × 6 = 48	6 × 7 = 42	9 × 7 = 63	6 × 6 = 36	8 × 4 = 32	10 × 6 = 60	3 × 8 = 24	6 × 9 = 54	5 × 6 = 30

Another way to find the area of a shape is to use a formula. The following is the formula for finding the area of a square or rectangle.

Area = Length × Width

To find the area for the shape below, you multiply the length of 5 units by the width of 4 units, which is 20 square units. You can use this formula to find the area of a square or rectangle instead of counting square units within the shape.



5 units × 4 units = 20 sq units
Length Width Area

4 units × 2 units = 8 sq units
Length Width Area

Lesson Practice

1. How do you find the perimeter of an object?

add the length of all sides together

2. What is the formula for finding the area of a rectangle or square?

Area = Length × Width

3. Read each description and decide whether you would need to find the area or the perimeter for each situation. Circle the correct answer.

a) I need to glue a ribbon around the edge of the table.
PERIMETER or AREA

b) I want to plant grass in my entire backyard.
PERIMETER or AREA

c) I need to buy enough wood shavings to cover the floor of my hamster cage.
PERIMETER or AREA

d) I need to cover the top of the table with a tablecloth.
PERIMETER or AREA

e) I want to plant flowers around the edge of my backyard.
PERIMETER or AREA

f) I am building a new cage for my hamster, and I need to buy enough wood for the walls of the cage.
PERIMETER or AREA

4. What are the perimeter and area of this shape?

PERIMETER: 26 units

AREA: 36 sq units

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set C quiz in Lesson 34. Then complete the problems in this section.

5 × 6 = 30	8 × 9 = 72	6 × 9 = 54	5 × 7 = 35
8 × 6 = 48	7 × 9 = 63	3 × 6 = 18	8 × 3 = 24
1 × 6 = 6	7 × 0 = 0	10 × 6 = 60	8 × 2 = 16
6 × 4 = 24	3 × 3 = 9	9 × 5 = 45	4 × 4 = 16
9 × 7 = 63	7 × 6 = 42	6 × 7 = 42	7 × 7 = 49
3 × 8 = 24	6 × 3 = 18	4 × 1 = 4	6 × 8 = 48
7 × 5 = 35	9 × 6 = 54	6 × 5 = 30	9 × 8 = 72

Use the zoo map on the page to the right to answer the following questions. All measurements are in units. Write all perimeter measurements in units and all area measurements in sq units.

- What is the perimeter of the African Savanna exhibit? 30 units
- What is the area of the Polar Bears exhibit? 30 sq units
- Which exhibit has a larger area: the Monkeys or Kangaroos? Kangaroos
- Which exhibit has a larger perimeter: the Entrance or Gift Shop? neither
- Which two exhibits have the exact same area? Kangaroos Elephants

- What is the perimeter of the Lions exhibit? 18 units
- What is the area of the Lions exhibit? 20 sq units

- Which has a larger perimeter: the Entrance or Carousel? Entrance
- What is the area of the African Savanna exhibit? 44 sq units
- How much larger is the area of the Lions exhibit than the Bird House? 14 sq units

- Which exhibit has a larger perimeter: the Kangaroos or Polar Bears? Kangaroos
- What is the perimeter of the entire zoo? 74 units

Create your own zoo: Follow the instructions to create your own zoo on the blank grid.

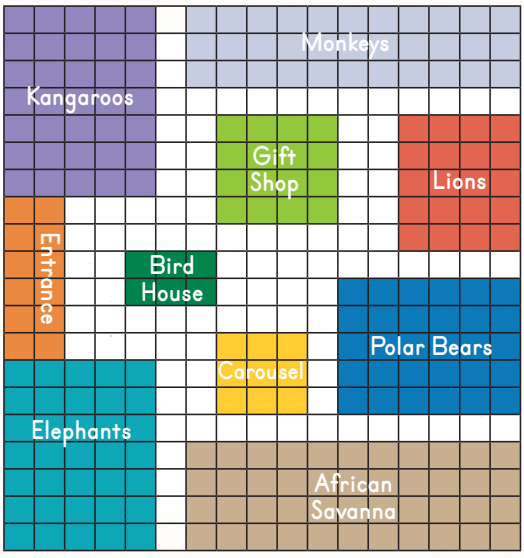
Add an ENTRANCE to your zoo. It can be located on any side and should be at least 8 sq units.

Add 6 animal exhibits of different sizes and colors. Label them with the name of the animal.

Don't forget a Gift Shop, a Snack Bar, and any other buildings you might like.

- Which exhibit in your zoo has the largest perimeter? Answers will vary.
- What is the area of the smallest animal exhibit in your zoo? _____
- Choose an exhibit and find the area and perimeter. _____ _____
- Do any of your exhibits have the exact same area? _____

WE'RE GOING TO THE ZOO



Answers will vary.

All done! No review.

Lesson Practice

1. Perfect squares make a pattern on a multiplication chart. Color in each perfect square from 1^2 to 12^2. The numbers 4^2 (4×4) and 9^2 (9×9) have been done for you.

	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

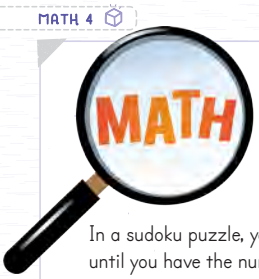
2. Convert each problem from factored form to exponent form. The first one is given as an example.

$5 \times 5 \times 5 \times 5$ 5^4 $1 \times 1 \times 1 \times 1 \times 1 \times 1$ 1^6 $12 \times 12 \times 12$ 12^3 7×7 7^2 $3 \times 3 \times 3$ 3^3

$2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$ 2^7 10×10 10^2 $6 \times 6 \times 6 \times 6 \times 6$ 6^5 $5 \times 5 \times 5 \times 5 \times 5 \times 5$ 5^6

3. Fill in the missing information. The first row has been done for you.

Exponent Form	Factored Form	Answer
1^2	1×1	1
2^2	2×2	4
3^2	3×3	9
4^2	4×4	16
5^2	5×5	25
6^2	6×6	36
7^2	7×7	49
8^2	8×8	64
9^2	9×9	81
10^2	10×10	100
11^2	11×11	121
12^2	12×12	144



MATH MYSTERIES

Sudoku

In a sudoku puzzle, you fill in the missing numbers until you have the numbers 1–9 in each block. Each number can only appear once in a row, column, or block. TIP: If a box has more than one possible option, skip it and come back to it after filling in more boxes.

4	3	9	2	6	8	7	1	5
6	7	8	4	5	1	2	3	9
1	5	2	9	3	7	8	4	6
7	9	4	3	1	2	6	5	8
8	1	5	6	4	9	3	7	2
3	2	6	8	7	5	1	9	4
5	8	3	7	9	6	4	2	1
2	4	1	5	8	3	9	6	7
9	6	7	1	2	4	5	8	3

Review

Complete each problem.

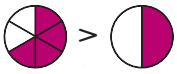
1,328	371	4,307	971	2,544
× 6	× 4	× 2	× 3	× 7
7,968	1,484	8,614	2,913	17,808

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set C quiz in Lesson 34. Then complete the problems in this section.

5	11	3	8	9	6	9	9
× 6	× 7	× 6	× 9	× 1	× 5	× 7	× 10
30	77	18	72	9	30	63	90
3	6	4	6	11	7	6	7
× 8	× 3	× 1	× 8	× 2	× 6	× 7	× 7
24	18	4	48	22	42	42	49
8	7	9	8	5	7	6	5
× 6	× 9	× 9	× 3	× 3	× 4	× 9	× 7
48	63	81	24	15	28	54	35
1	7	10	8	7	9	4	9
× 6	× 0	× 6	× 2	× 5	× 6	× 5	× 8
6	0	60	16	35	54	20	72

We can use pictures to compare a fraction to one-half.



In this picture we can clearly see that four-sixths is greater than one-half.

We can compare fractions to one-half without pictures as well. To determine if a fraction is greater than or less than one-half, we find half of the denominator and then see how the numerator compares to this number.

If the numerator is greater than half of the denominator, the fraction is greater than one-half.

If the numerator is less than half of the denominator, the fraction is less than one-half.

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

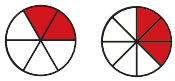
Half of the denominator is 2. The numerator 3 is greater than 2. So three-fourths is greater than one-half.

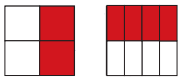
$\frac{3}{10} < \frac{1}{2}$

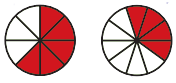
Half of the denominator is 5. The numerator 3 is less than 5. So three-tenths is less than one-half.

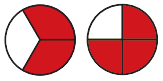
Lesson Practice

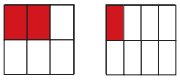
Shade each shape, and then fill in a <, >, or = sign to compare the fractions.

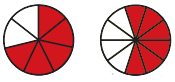
1.  $\frac{2}{6} < \frac{3}{8}$

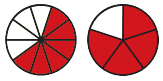
2.  $\frac{2}{4} = \frac{4}{8}$

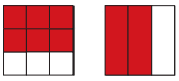
3.  $\frac{5}{8} > \frac{4}{10}$

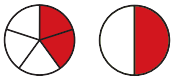
4.  $\frac{2}{3} < \frac{3}{4}$

5.  $\frac{2}{6} > \frac{1}{8}$

6.  $\frac{5}{7} > \frac{6}{10}$

7.  $\frac{6}{10} < \frac{4}{5}$

8.  $\frac{6}{9} = \frac{2}{3}$

9.  $\frac{2}{5} < \frac{1}{2}$

10. Determine if each fraction is greater than, less than, or equal to $\frac{1}{2}$.

$\frac{7}{12} > \frac{1}{2}$ $\quad \frac{2}{6} < \frac{1}{2}$ $\quad \frac{5}{10} = \frac{1}{2}$

$\frac{2}{3} > \frac{1}{2}$ $\quad \frac{3}{5} > \frac{1}{2}$ $\quad \frac{5}{9} > \frac{1}{2}$ $\quad \frac{4}{8} = \frac{1}{2}$

Review

1. Kelly is planting a vegetable garden. Her garden box is a square that is 3 feet on each side. What is the perimeter and area of her garden box?

Perimeter = 12 ft Area = 9 sq ft

2. Write the perfect squares by multiplying each number by itself.

$7^2 = 49$ $\quad 10^2 = 100$ $\quad 4^2 = 16$ $\quad 8^2 = 64$

3. Fill in the missing information to make equivalent fractions.

$\frac{3}{5} \xrightarrow{\times 3} \frac{9}{15}$ $\quad \frac{2}{6} \xrightarrow{\times 4} \frac{8}{24}$ $\quad \frac{1}{8} \xrightarrow{\times 2} \frac{2}{16}$

4. Complete.

4,305 × 6 = 25,830	655 × 4 = 2,620	1,321 × 2 = 2,642	762 × 8 = 6,096

5. Zoe is baking some homemade bread, but she can't find her one-cup measuring cup. Circle the amount of each smaller measurement she'll need to use to equal one cup.

1 cup = $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$

1 cup = $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$

1 cup = $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set C quiz in Lesson 34. Then complete the problems in this section.

9 × 8 = 72	9 × 6 = 54	8 × 3 = 24	7 × 9 = 63	7 × 7 = 49	7 × 6 = 42	9 × 4 = 36	9 × 5 = 45	6 × 8 = 48	6 × 3 = 18	5 × 7 = 35	8 × 9 = 72
6 × 5 = 30	7 × 5 = 35	3 × 6 = 18	8 × 6 = 48	6 × 7 = 42	9 × 7 = 63	6 × 4 = 24	8 × 8 = 64	10 × 6 = 60	3 × 8 = 24	6 × 9 = 54	5 × 6 = 30

Lesson Practice

Fill in the missing information for each problem. Then fill in the boxes to show the associative property.

do first: $(8 + 7) + 6$ → $15 + 6$ → 21

do first: $8 + (7 + 6)$ → $8 + 13$ → 21

do first: $4 \times (2 \times 3)$ → 4×6 → 24

do first: $(4 \times 2) \times 3$ → 8×3 → 24

Targeted Multiplication Fact Practice
Review Sets A, B, and C

Practice any problems you missed in your Set C quiz in Lesson 34. Then complete the problems in this section to review Sets A, B, and C facts.

3 × 3 = 9	9 × 5 = 45	6 × 6 = 36	9 × 4 = 36	5 × 3 = 15	4 × 4 = 16	8 × 4 = 32	4 × 5 = 20	7 × 3 = 21	8 × 8 = 64	7 × 4 = 28	3 × 4 = 12	8 × 5 = 40	5 × 5 = 25	9 × 9 = 81	8 × 7 = 56	9 × 3 = 27
6 × 4 = 24	5 × 6 = 30	8 × 9 = 72	6 × 9 = 54	5 × 7 = 35	3 × 8 = 24	9 × 7 = 63	6 × 3 = 18	6 × 8 = 48	6 × 7 = 42	8 × 6 = 48	7 × 6 = 42	7 × 7 = 49	8 × 3 = 24	7 × 9 = 63	7 × 5 = 35	9 × 6 = 54
4 × 6 = 24	3 × 6 = 18	9 × 9 = 81	5 × 9 = 45	6 × 6 = 36	3 × 7 = 21	3 × 5 = 15	5 × 4 = 20	6 × 5 = 30	4 × 8 = 32	9 × 8 = 72	4 × 7 = 28	5 × 8 = 40	7 × 8 = 56	3 × 9 = 27	4 × 9 = 36	4 × 3 = 12

Lesson Practice

Snowing SOLUTIONS

1. Mathematical operations must be performed in a certain order. Write the following operations in the correct order in the box below.

ADD & SUBTRACT PARENTHESES MULTIPLY & DIVIDE EXPONENTS

1. Parentheses
2. Exponents
3. Multiply and Divide
4. Add and Subtract

2. If one operation is not present in a problem, skip it and go to the next operation. In the problem $3 + 4 \times 7$, there are no parentheses or exponents, so you would skip those steps and go to the next. Multiplication is the first step in this example. For each problem below, write which step you would complete first using the order of operations.

$(4 + 2) \times 4^2 - 1 =$	Parentheses
$4 - 2 + 1 =$	Subtract
$4 + 2 \times 4^2 - 1 =$	Exponents
$4 + 2 \times 3 - 1 =$	Multiply

3. Write the phrase that can help you remember the order of operations.

P l e a s e E x c u s e M y
D e a r A u n t S a l l y

4. Complete each problem using the order of operations. Use scratch paper if you need more room. Remember, if you have both multiplication and division or addition and subtraction in the same problem, you work from left to right.

$10 - 4 + (5 \times 5) = 31$ $20 - (8 \times 2) = 4$

$(3 + 5) \div 2 = 4$ $5 \times (6 - 3) + 7 = 22$

$4^2 + (15 \div 3) = 21$ $6 \times 4 + 5 - 10 = 19$

$12 - (3 \times 2) + 2^2 = 10$ $2^2 \div 2 + (4 \times 1) = 6$

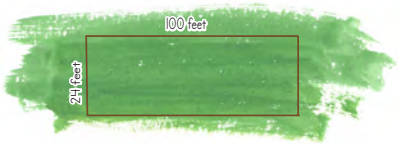
Review

1. Luis' family has a llama farm in the mountains of Peru. They bought five new llamas and are building a corral for them. Using the diagram, find how many feet of fencing they will need to build the new corral.

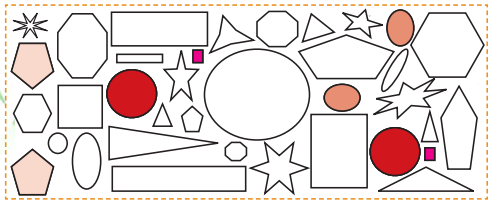
248 ft

2. Luis knows that they need at least 2,000 sq ft of grass for the five new llamas. Is the new corral big enough? What is the area of the new corral?

Yes. 2,400 sq ft



3. Find the congruent shapes and color each set the same color.



Read with your parent or teacher

It's time to take your next Multiplication Mastery Assessment. Have your parent or teacher quiz you on Multiplication Set C, using the Multiplication Mastery Chart on page 395.

Parent/Teacher: Indicate which facts from Set C the student has mastered in the "Mastered" column on page 395. Your student will continue to review and practice these facts throughout the course.

4. Which fraction is the greatest? Divide and shade the shapes to find out. Circle the greatest fraction.

$\frac{3}{4}$ $\frac{2}{3}$ $\frac{5}{6}$ $\frac{1}{2}$

DIVISION in the Garden

Complete each division problem in the rose garden picture. Even if you can do these problems in your head, you should practice using the four long division steps: divide, multiply, subtract, and bring down. You can use the visual below to help you remember the steps.

Long Division Steps

1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

(Repeat)

Review

1. Fill in the missing information. The first one has been done for you.


$\frac{3}{7}$ three-sevenths


$\frac{5}{5}$ five-fifths


$\frac{4}{5}$ four-fifths


$\frac{2}{5}$ two-fifths


$\frac{3}{7}$ three-sevenths

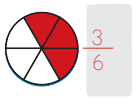

$\frac{2}{6}$ two-sixths


$\frac{6}{6}$ six-sixths


$\frac{6}{7}$ six-sevenths


$\frac{1}{4}$ one-fourth

2. Shade half of each shape, and then write the fraction that represents the shaded part of the shape.


$\frac{3}{6}$


$\frac{3}{6}$


$\frac{5}{10}$


$\frac{2}{4}$

3. Complete the problems.

78				
236,310	34,195	3,924	6,247	600,000,000
1,145	6,384	× 9	× 3	- 245,265,179
+ 86,857	+ 277	35,316	18,741	354,734,821
324,312	40,934			

4. Complete each problem using the order of operations. Use scratch paper if you need more room.

$5^2 \div (25 \div 5) = 5$

$4 \times (11 - 8) \times 5 = 60$

$16 + (3 \times 8) = 40$

$22 - (6 \times 3) + 2 = 6$

Multiplication Fact Practice

Practice Set D for 10 minutes or more by doing *Musical Multiplication* or using flashcards. Then complete the problems in this section.

12 × 3 = 36	11 × 12 = 132	12 × 4 = 48	8 × 4 = 32
12 × 12 = 144	3 × 12 = 36	8 × 9 = 72	6 × 9 = 54
12 × 8 = 96	6 × 12 = 72	12 × 7 = 84	8 × 5 = 40
12 × 9 = 108	7 × 12 = 84	5 × 12 = 60	9 × 4 = 36
4 × 12 = 48	12 × 11 = 132	9 × 12 = 108	5 × 6 = 30
12 × 5 = 60	8 × 12 = 96	12 × 6 = 72	6 × 6 = 36

Factors are numbers that are multiplied together to form a product. ***Factors of a number*** are the whole numbers that can be multiplied together to make a given number. Factors are only listed once, from least to greatest. We find that 1, 2, 5, and 10 are factors of 10.

10
1 × 10
2 × 5
FACTORS 1, 2, 5, 10

9
1 × 9
3 × 3
FACTORS 1, 3, 9

12
1 × 12
2 × 6
3 × 4
FACTORS 1, 2, 3, 4, 6, 12

Lesson Practice

1. List the multiples of 3 up to 42. The first three multiples are written for you.

3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42

2. List the multiples of 7 up to 70. The first three multiples are written for you.

7, 14, 21, 28, 35, 42, 49, 56, 63, 70

3. Write two multiples that 3 and 7 have in common.
Hint: Look for numbers that you wrote in both Problems 1 and 2.

21, 42

4. List the first five multiples of 20.
20, 40, 60, 80, 100

5. List the first five multiples of 50.
50, 100, 150, 200, 250

6. List the factors of each number from least to greatest. The first one has been done for you.

15
1 × 15
3 × 5
1, 3, 5, 15

8
1 × 8
2 × 4
1, 2, 4, 8

18
1 × 18
2 × 9
3 × 6
1, 2, 3, 6, 9, 18

21
1 × 21
3 × 7
1, 3, 7, 21

✧ Multiplication Fact Practice ✧

Practice Set D for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this section.

12 × 3 = 36	11 × 12 = 132	12 × 4 = 48	8 × 4 = 32
12 × 12 = 144	3 × 12 = 36	8 × 9 = 72	6 × 9 = 54
12 × 8 = 96	6 × 12 = 72	12 × 7 = 84	8 × 5 = 40
12 × 9 = 108	7 × 12 = 84	5 × 12 = 60	9 × 4 = 36
4 × 12 = 48	12 × 11 = 132	9 × 12 = 108	5 × 6 = 30
12 × 5 = 60	8 × 12 = 96	12 × 6 = 72	6 × 6 = 36

Review

1. Fill in the missing information.

6 L = 6,000 mL

8 c = 4 pt = 2 qt

15,000 mL = 15 L

3 gal = 12 qt = 24 pt = 48 c

2. Find the perfect squares.

$2^2 = 4$ $9^2 = 81$ $7^2 = 49$

3. Complete each problem on scratch paper.

$2\overline{)42} = 21$

$3\overline{)36} = 12$

$4\overline{)48} = 12$

1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

4. Complete each problem using the order of operations. Use scratch paper if you need more room.

$3^2 - (16 \div 4) = 5$

$2 \times (8 + 2) - 5 = 15$

$12 + (5 \times 6) = 42$

$6^2 - 20 + (4 \times 3) = 28$

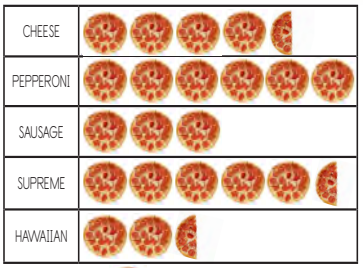
5. We don't know how many animals Noah had on the ark. Let's suppose that there were 235,174 animals on the ark. How many animals were there rounded to the nearest thousand? Rounded to the nearest hundred thousand?

235,000 200,000

POPULAR PIZZA

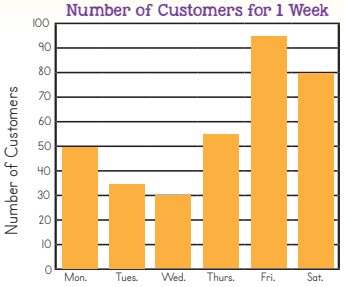
Franco is the manager of Russo's Pizzeria. He created the following graphs to help him improve sales at the restaurant. Answer the questions at the bottom of the page using these three graphs.

Number of Pizzas Sold on December 17th



= 6 pizzas

Number of Customers for 1 Week



Monthly Profit for 2021

1. On Dec. 17, what were the two most popular pizzas? pepperoni, supreme
2. What was the busiest day of the week? Friday
3. How much profit did the restaurant make in November 2021? $3,000
4. How many customers ate at Russo's Pizzeria on Tuesday? 35
5. How many supreme pizzas were sold on Dec. 17? 33
6. How many more cheese pizzas were sold than sausage? 9
7. What was the total number of customers on Wed. and Thurs.? 85
8. Which day of the week is Russo's Pizzeria closed? Sunday
9. How many Hawaiian and cheese pizzas were sold on Dec. 17? 42
10. Russo's was closed for two weeks for renovations and had no sales during that time. During which month did the renovations probably happen, based on the sales? February
11. Franco wants to have a "Buy One, Get One Free" sale on the slowest days to help bring in more customers. On which two days should he have the sale? Tuesday and Wednesday
12. Russo's Pizzeria is busiest in the summer. How much more profit did it make in July than in November? $5,000
13. How many customers did Russo's Pizzeria have for the entire week? 345

Review

1. List the first seven multiples of 25.

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

2. Find the factor pairs of each number, and then list the factors. The first one has been done for you.

10	6	22	16
1 × 10	1 × 6	1 × 22	1 × 16
2 × 5	2 × 3	2 × 11	2 × 8
1, 2, 5, 10	1, 2, 3, 6	1, 2, 11, 22	4 × 4
			1, 2, 4, 8, 16

3. Complete each problem using the order of operations. Use scratch paper if you need more room.

$4^2 + (3 \times 3) = 25$

$4 \times (14 - 8) - 2 = 22$

$23 - (15 \div 3) = 18$

$3^2 + 8 - (2 \times 2) = 13$

4. Complete each problem.

$3\overline{)36} = 12$ $\quad 2\overline{)62} = 31$ $\quad 4\overline{)84} = 21$ $\quad 5\overline{)55} = 11$

1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

Repeat

Multiplication Fact Practice

Practice Set D for 10 minutes or more by doing *Musical Multiplication* or flashcards. Then complete the problems in this section.

12 × 5 = 60	8 × 12 = 96	12 × 6 = 72	3 × 3 = 9
12 × 3 = 36	11 × 12 = 132	12 × 4 = 48	7 × 3 = 21
12 × 8 = 96	6 × 12 = 72	12 × 7 = 84	4 × 4 = 16
12 × 12 = 144	3 × 12 = 36	6 × 4 = 24	3 × 6 = 18
4 × 12 = 48	12 × 11 = 132	9 × 12 = 108	7 × 7 = 49
12 × 9 = 108	7 × 12 = 84	5 × 12 = 60	6 × 3 = 18

Order #1

2 × 6 = 12

6 × 2 = 12

12 ÷ 2 = 6

12 ÷ 6 = 2

Fact Family for 2, 6, 12

Order #2

2 × 9 = 18

9 × 2 = 18

18 ÷ 2 = 9

18 ÷ 9 = 2

Fact Family for 2, 9, 18

Order #3

5 × 12 = 60

12 × 5 = 60

60 ÷ 5 = 12

60 ÷ 12 = 5

Fact Family for 5, 12, 60

Order #4

3 × 4 = 12

4 × 3 = 12

12 ÷ 3 = 4

12 ÷ 4 = 3

Fact Family for 3, 4, 12

Order #5

10 × 6 = 60

6 × 10 = 60

60 ÷ 6 = 10

60 ÷ 10 = 6

Fact Family for 6, 10, 60

Order #6

2 × 12 = 24

12 × 2 = 24

24 ÷ 12 = 2

24 ÷ 2 = 12

Fact Family for 2, 12, 24

Order #7

5 × 6 = 30

6 × 5 = 30

30 ÷ 6 = 5

30 ÷ 5 = 6

Fact Family for 5, 6, 30

Order #8

3 × 8 = 24

8 × 3 = 24

24 ÷ 3 = 8

24 ÷ 8 = 3

Fact Family for 3, 8, 24

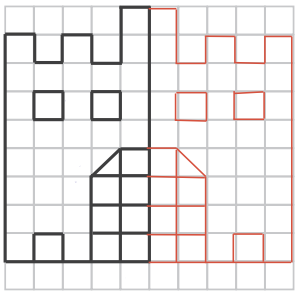
Isaiah wants to put the name of each customer on the correct bag of cookies. Use the alphabet code below to figure out the name of each customer he should write.

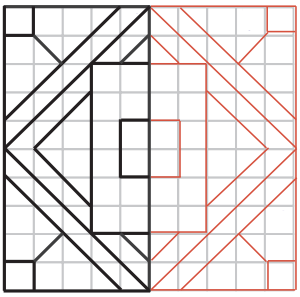
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

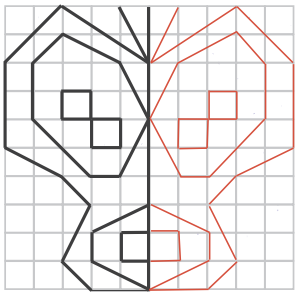
1. J o e (10 15 5)
2. L e e (12 5 5)
3. P a m (16 1 13)
4. J e n (10 5 14)
5. R e x (18 5 24)
6. A m y (1 13 25)
7. E l i (5 12 9)
8. S a m (19 1 13)

Lesson Practice

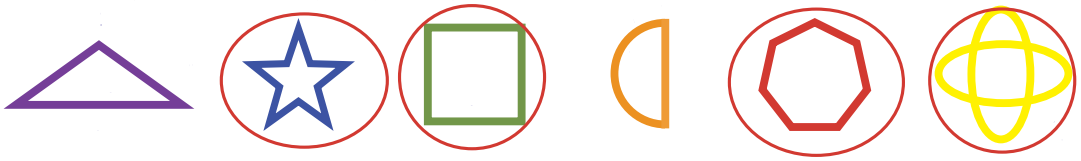
1. Draw a mirror image to show reflectional symmetry. If desired, you may color the images.







2. Circle the images that have rotational symmetry (the image can be rotated less than one full turn and still look the same).



3. Draw any lines of symmetry on each picture. Write the number of lines of symmetry under each picture.

4 | 1 | 2 | 1 | 4 | 0 | 6

Multiplication Fact Practice

Practice Set D for 10 minutes, and then complete these problems.

12 × 8 = 96	6 × 10 = 60	12 × 7 = 84	9 × 9 = 81
11 × 8 = 88	6 × 12 = 72	12 × 1 = 12	3 × 5 = 15
12 × 9 = 108	7 × 12 = 84	5 × 12 = 60	9 × 5 = 45
12 × 5 = 60	8 × 12 = 96	12 × 6 = 72	5 × 4 = 20
4 × 12 = 48	12 × 11 = 132	9 × 12 = 108	7 × 9 = 63
12 × 3 = 36	11 × 12 = 132	12 × 4 = 48	8 × 3 = 24
12 × 12 = 144	3 × 12 = 36	9 × 6 = 54	9 × 8 = 72

Review

1. Complete each division problem. Use scratch paper if you need more room.

$3\overline{)63} = 21$ $\quad 2\overline{)48} = 24$ $\quad 4\overline{)88} = 22$

1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

(Repeat)

2. Find the factors for each circled number.

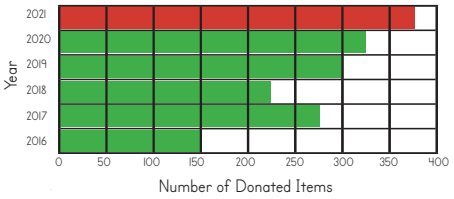
6: 1 x 6, 2 x 3 — 1, 2, 3, 6

12: 1 x 12, 2 x 6, 3 x 4 — 1, 2, 3, 4, 6, 12

15: 1 x 15, 3 x 5 — 1, 3, 5, 15

3. Every year the students at Robin's school have a Christmas food drive for the local food shelter. In which years did they collect more than 250 items?

2020, 2019, 2017



4. Determine if each fraction is greater than, less than, or equal to $\frac{1}{2}$.

$\frac{7}{12} > \frac{1}{2}$ $\quad \frac{2}{6} < \frac{1}{2}$ $\quad \frac{2}{3} > \frac{1}{2}$ $\quad \frac{3}{5} > \frac{1}{2}$

5. How many more items did they collect in 2018 than in 2016?

75

6. How many items did they collect altogether in 2019 and 2020?

625

7. If the children in Robin's school collect 50 more items in 2021 than they did in 2020, how many items will they collect? Shade in the bar graph to show the amount.

375

Boiling point of water: 100 °C 212 °F

Freezing point of water: 0 °C 32 °F

Normal body temperature: 37 °C 98.6 °F

Lesson Practice

1. Use the clues and circle whether each temperature is in degrees Fahrenheit or Celsius.

It's 32 degrees outside, and Aaron is heading to the beach to go swimming with his friends.

°F or (°C)

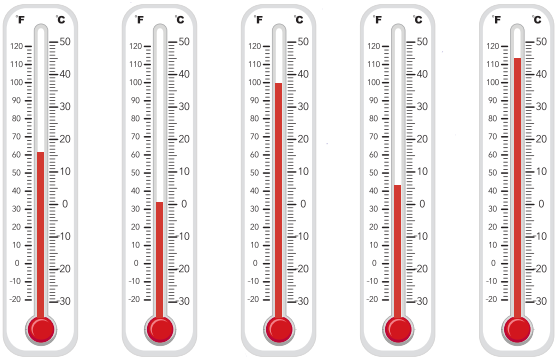
Bella is sick and running a fever. Her mom tucks her into bed and takes her temperature. It's 40 degrees.

°F or (°C)

Eric is waiting for a pot of water to boil so he can add pasta for spaghetti. He checks the temperature of the water. It's 203 degrees.

(°F) or °C

2. Determine the temperature shown on each thermometer in degrees Fahrenheit and Celsius.

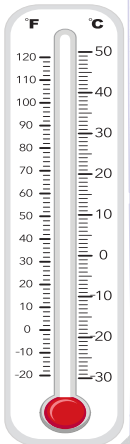


62 °F	34 °F	100 °F	43 °F	114 °F
16 °C	1 °C	38 °C	6 °C	45 °C

3. Use the thermometer to the right to find the closest corresponding temperature in degrees Fahrenheit or Celsius. The first one is given as an example.

Degrees do not convert exactly. An approximate answer is fine in this section.

60 °F = 15 °C	80 °F = 26 °C	95 °F = 35 °C
10 °F = -12 °C	5 °F = -15 °C	68 °F = 20 °C
24 °F = -5 °C	100 °F = 38 °C	100 °F = 38 °C



Review

1. Fill in the missing information to make equivalent fractions.

$\frac{2}{3} = \frac{4}{6}$ (×2)

$\frac{2}{3} = \frac{8}{12}$ (×4)

$\frac{2}{3} = \frac{12}{18}$ (×6)

2. Subtract and add.

4,000,000 − 2,167,324 = 1,832,676

412,075 + 3,547 + 22,418 = 438,040

Number of Soccer Games Won

THE DUCKS	⚽⚽⚽⚽
PINK LIGHTNING	⚽⚽◐
THUNDER CATS	⚽
THE FORCE	⚽⚽⚽

⚽ = 4 games

See the Reference Guide on page 394.

3. If Pink Lightning has won 10 games, how many games does each ball symbol represent on the pictograph?
4

4. How many more games has The Force won than the Thunder Cats?
8

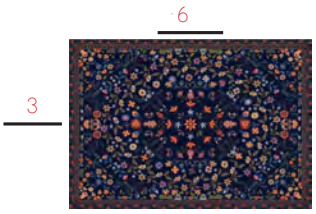
5. A team needs to win 20 games to win the championship. How many more games do The Ducks need to win in order to win the championship?
4

6. Complete each conversion.

12 L = 12,000 mL

12 qt = 3 gal

7. Lateesha's family has a new rug. The area of the rug is 18 sq feet and the perimeter is 18 feet. What is the length and width of the rug?



✧ Multiplication Fact Practice ✧

Practice Set D for 10 minutes. Then complete the problems in this section.

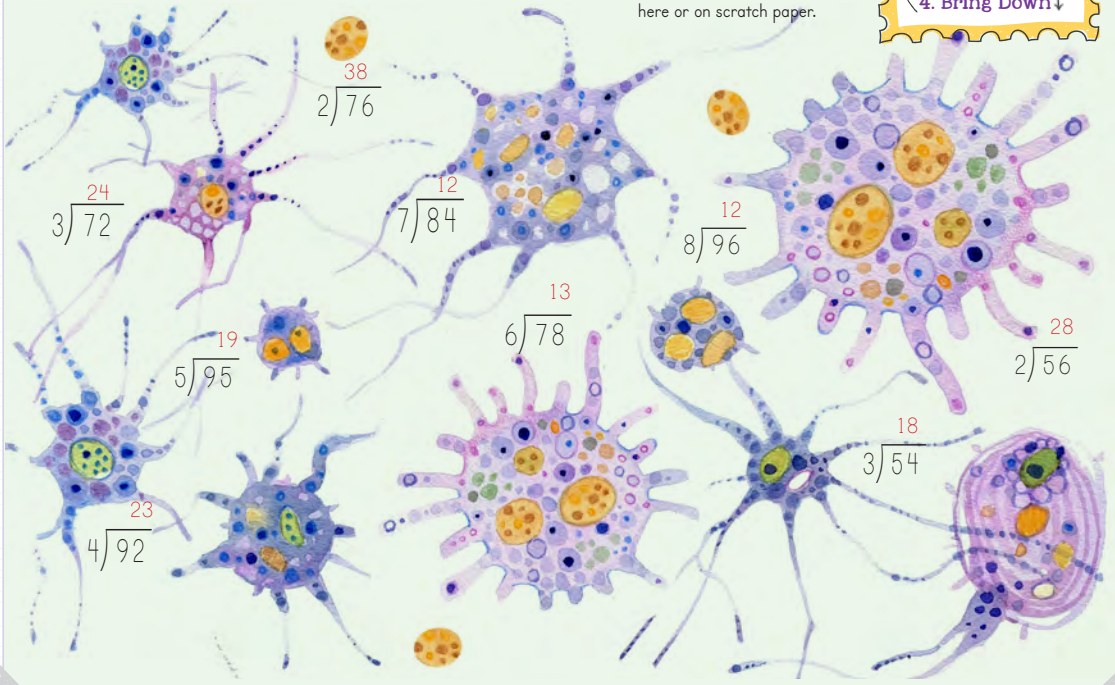
12 × 3 = 36	11 × 12 = 132	12 × 4 = 48	5 × 3 = 15	12 × 8 = 96	6 × 12 = 72	12 × 7 = 84	8 × 8 = 64	4 × 12 = 48	12 × 11 = 132	9 × 12 = 108	4 × 5 = 20
12 × 12 = 144	3 × 12 = 36	7 × 4 = 28	3 × 8 = 24	12 × 9 = 108	7 × 12 = 84	5 × 12 = 60	9 × 7 = 63	12 × 5 = 60	8 × 12 = 96	12 × 6 = 72	6 × 7 = 42

CELLULAR DIVISION

Find and complete each long division problem among the brain cells using the four long division steps. Show your work here or on scratch paper.

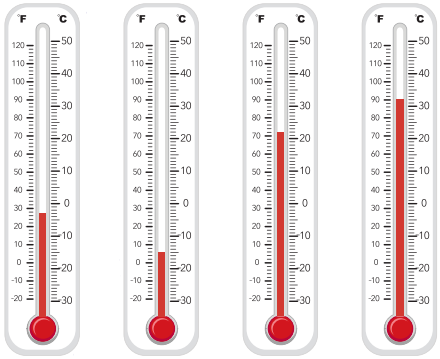
1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

(Repeat)



Review

1. Write the temperature shown on each thermometer in °F and °C.



27 °F / -3 °C | 6 °F / -15 °C | 72 °F / 22 °C | 90 °F / 32 °C

2. The Juarez family owns a sheep farm in New South Wales, Australia. They have 15 different flocks with about 100 sheep in each flock. About how many sheep do they have altogether?

1,500 sheep

3. After the roundup, the Juarez family counts the sheep to get an exact number. They count 4,932 sheep. How many sheep do they have rounded to the nearest thousand?

5,000 sheep

4. Complete each problem using the order of operations. Use scratch paper if you need more room.

$5^2 - (6 \times 2) = 13$

$30 + (24 \div 8) = 33$

$6 + 21 \div 3 = 13$

$6^2 - 10 + (2 + 2) = 30$

$3 \times (20 + 5) - 7 = 68$

✧ Multiplication Fact Practice ✧

Practice Set D for 10 minutes. Then complete the problems in this section.

12 × 3 = 36	11 × 12 = 132	12 × 4 = 48	3 × 4 = 12	12 × 12 = 144	3 × 12 = 36	5 × 5 = 25	8 × 7 = 56
12 × 8 = 96	6 × 12 = 72	12 × 7 = 84	9 × 3 = 27	12 × 9 = 108	7 × 12 = 84	5 × 12 = 60	5 × 7 = 35
4 × 12 = 48	12 × 11 = 132	9 × 12 = 108	6 × 8 = 48	12 × 5 = 60	8 × 12 = 96	12 × 6 = 72	7 × 6 = 42

Remember that when the numerator and denominator of a fraction are the same, the fraction is equal to one whole. We can use this information to write fraction addition sentences with a sum of one. Look at some examples below.

$\frac{4}{5} + \frac{1}{5} = \frac{5}{5} = 1$

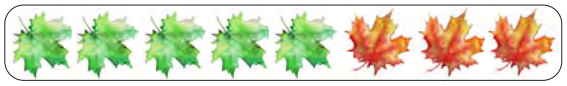
$\frac{2}{4} + \frac{2}{4} = \frac{4}{4} = 1$

$\frac{3}{7} + \frac{4}{7} = \frac{7}{7} = 1$

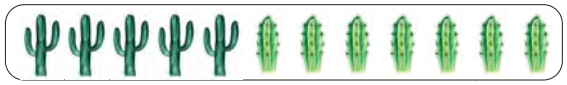
$\frac{1}{3} + \frac{2}{3} = \frac{3}{3} = 1$

Lesson Practice

1. Write a fraction next to each picture that tells the fraction of the set.



$= \frac{3}{8}$ $= \frac{5}{8}$



$= \frac{5}{12}$ $= \frac{7}{12}$

$= \frac{6}{10}$ $= \frac{4}{10}$

2. If we eat 4 of the 6 pineapples, what fraction of the pineapples are left?

$\frac{2}{6}$

4. If 3 birds flew away, what fraction of the birds are left?

$\frac{8}{11}$

3. Fill in the missing information to make each equation true.

$\frac{2}{8} + \frac{6}{8} = \frac{8}{8} = 1$

$\frac{4}{6} + \frac{2}{6} = \frac{6}{6} = 1$

$\frac{7}{10} + \frac{3}{10} = \frac{10}{10} = 1$

$\frac{7}{9} + \frac{2}{9} = \frac{9}{9} = 1$

5. Add or subtract the fractions. Hint: Add or subtract the numerators, but the denominators stay the same.

$\frac{2}{12} + \frac{7}{12} = \frac{9}{12}$

$\frac{6}{7} - \frac{2}{7} = \frac{4}{7}$

$\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$

$\frac{9}{9} - \frac{4}{9} = \frac{5}{9}$

Review

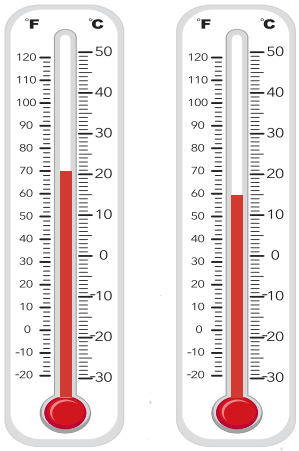
1. Complete each division problem. Use scratch paper if you need more room.

$4\overline{)64} = 16$ $\quad 7\overline{)98} = 14$ $\quad 5\overline{)85} = 17$ $\quad 3\overline{)57} = 19$

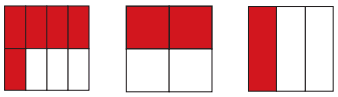
1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

4. Draw a line of symmetry for each picture.

2. Shade the thermometer on the left to show 70 °F. Shade the thermometer on the right to show 15 °C.



3. Divide and shade each of the shapes to show the fraction listed below it. Circle the smallest fraction.



$\frac{5}{8}$ $\quad \frac{2}{4}$ $\quad \frac{1}{3}$

5. List the first six multiples of 8.

8, 16, 24, 32, 40, 48

6. List the factors of 18.

1 x 18
2 x 9
3 x 6

1, 2, 3, 6, 9, 18

Multiplication Fact Practice

Practice Set D for 10 minutes. Then complete the problems in this section.

12 × 3 = 36	11 × 12 = 132	12 × 4 = 48	8 × 4 = 32	12 × 8 = 96	6 × 12 = 72	12 × 7 = 84	6 × 6 = 36	4 × 12 = 48	12 × 11 = 132	9 × 12 = 108	8 × 5 = 40
12 × 12 = 144	3 × 12 = 36	9 × 4 = 36	3 × 8 = 24	12 × 9 = 108	7 × 12 = 84	5 × 12 = 60	5 × 6 = 30	12 × 5 = 60	8 × 12 = 96	12 × 6 = 72	8 × 9 = 72

VARIETY	SAME
Peanut Butter Sandwich	Hamburger
Slice of Pizza	Cheeseburger
Bowl of Soup	Bacon Cheeseburger
Cheeseburger	Double Cheeseburger

The boxes above show example answers for the survey question "Which lunch item do you prefer?" The side labeled "VARIETY" gives options that are not similar to each other. The side labeled "SAME" gives only options that are too similar. It's important to create answers that are different from each other to get accurate data.

Choose a POPULATION and a SAMPLE:

Before you start collecting data for your survey, you need to decide who will be the focus of your survey. Do you want to ask only parents the question, only other kids, or maybe a combination? Do you want to ask only your family the question or just your friends? Depending on the size of the population you choose, you can ask the question to the whole group or ask only a sample of that larger group. Some examples of populations and samples are listed below.

POPULATION	SAMPLE
1. Neighborhood	1. One street in neighborhood
2. Adults	2. Adults in your family
3. Kids	3. Your friends
4. Church members	4. Members at one service

Once you complete all three steps for creating a survey, you are ready to collect your data. Use the page provided to list your question and answers. Then use tally marks to collect the data for your survey. In the next lesson, you will use the data to create a graph.

My Survey

CHOOSE A QUESTION AND WRITE IT HERE:

Answers will vary.

CHOOSE FOUR POSSIBLE ANSWERS AND LIST THEM HERE. LEAVE ROOM TO MAKE TALLY MARKS UNDER EACH ANSWER.

ANSWER #1	ANSWER #2
ANSWER #3	ANSWER #4

CHOOSE A POPULATION AND A SAMPLE AND WRITE THEM HERE:

POPULATION	SAMPLE

YOU'RE READY TO CONDUCT YOUR SURVEY! ASK 10–20 PEOPLE IN YOUR SAMPLE TO ANSWER YOUR QUESTION AND DRAW A TALLY MARK UNDER THE ANSWERS THEY CHOOSE. IN THE NEXT LESSON, YOU WILL GRAPH THE DATA FROM YOUR SURVEY.

1. Divide
2. Multiply
3. Subtract
4. Bring down

Repeat

Review

1. Fill in the four steps of long division in the box above. Then complete these division problems on scratch paper.

$21\overline{)63}$ $13\overline{)91}$ $36\overline{)72}$

$12\overline{)72}$ $23\overline{)92}$ $13\overline{)65}$

2. Add or subtract the fractions. Hint: Add or subtract the numerators, but the denominators stay the same.

$\frac{1}{4} + \frac{3}{4} = \frac{4}{4}$ $\frac{12}{15} - \frac{8}{15} = \frac{4}{15}$

$\frac{6}{10} + \frac{2}{10} = \frac{8}{10}$ $\frac{7}{8} - \frac{3}{8} = \frac{4}{8}$

3. Complete each problem using the order of operations. Use scratch paper if you need more room.

$4^2 + (3 \times 3) = 25$ $4 \times (14 - 8) - 2 = 22$

$23 - 15 \div 3 = 18$ $3^2 + 8 - (2 \times 2) = 13$

4. Write a fraction next to each picture that tells the fraction of the set.

$\frac{3}{7}$ $\frac{4}{7}$

5. One plane takes off. What fraction of the planes are still on the ground?

$\frac{4}{5}$

☑ Multiplication Fact Quiz ☑

Have your parent or teacher quiz you on the Set D multiplication facts below and circle any facts you missed. You will be doing targeted practice on these facts for the next few lessons.

12 × 3 = 36	12 × 12 = 144	12 × 8 = 96	12 × 5 = 60	12 × 11 = 132	12 × 7 = 84	12 × 4 = 48	12 × 9 = 108	12 × 6 = 72
9 × 12 = 108	3 × 12 = 36	11 × 12 = 132	8 × 12 = 96	5 × 12 = 60	6 × 12 = 72	4 × 12 = 48	7 × 12 = 84	2 × 12 = 24

My Graph

In this lesson you will use the data you collected from your survey to create a bar graph using the blank graph.

Step 1: Title the Graph

What question did you ask for your survey? Briefly describe the topic of your survey and use that for the title of your graph. Decide on a title and write it on the graph.

Step 2: Select a Scale

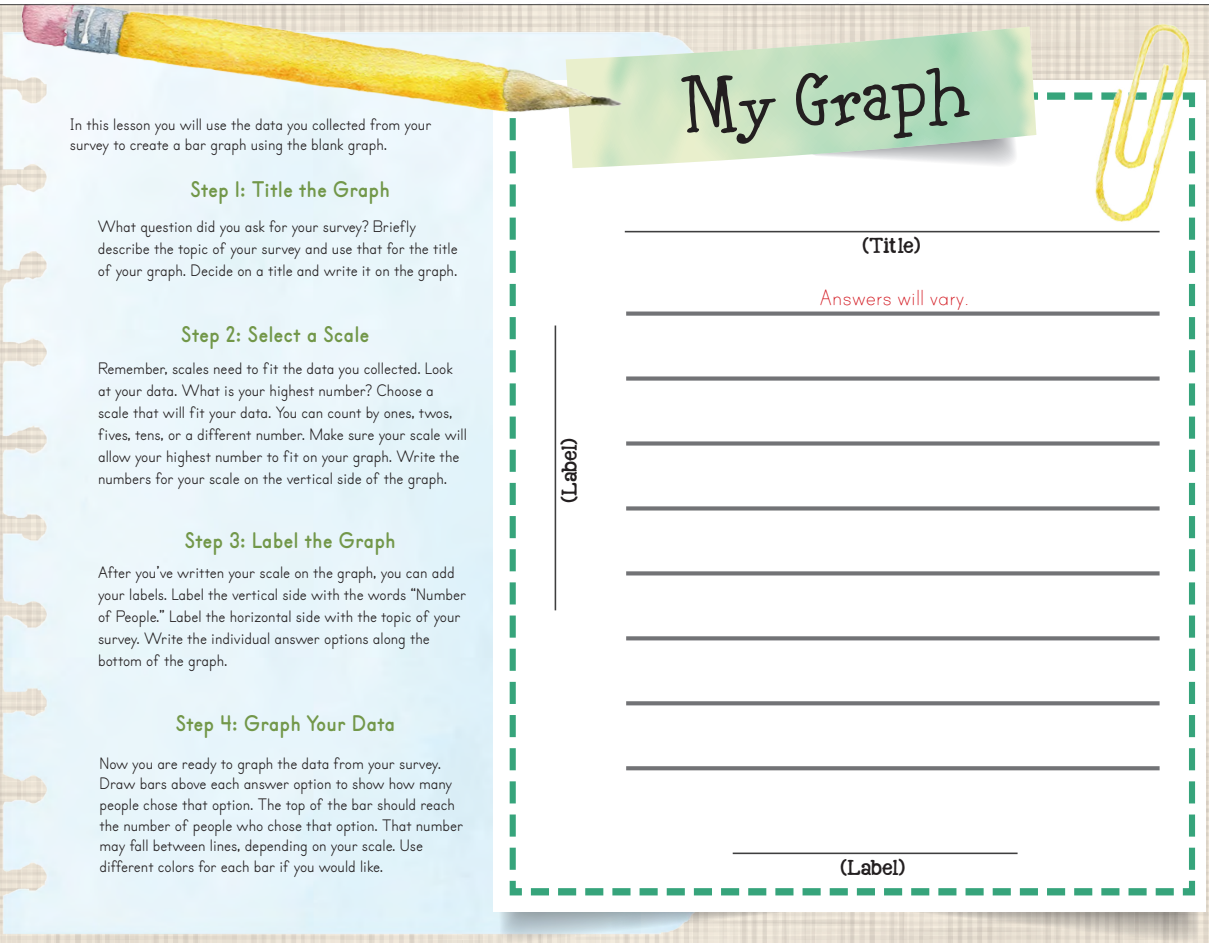
Remember, scales need to fit the data you collected. Look at your data. What is your highest number? Choose a scale that will fit your data. You can count by ones, twos, fives, tens, or a different number. Make sure your scale will allow your highest number to fit on your graph. Write the numbers for your scale on the vertical side of the graph.

Step 3: Label the Graph

After you've written your scale on the graph, you can add your labels. Label the vertical side with the words "Number of People." Label the horizontal side with the topic of your survey. Write the individual answer options along the bottom of the graph.

Step 4: Graph Your Data

Now you are ready to graph the data from your survey. Draw bars above each answer option to show how many people chose that option. The top of the bar should reach the number of people who chose that option. That number may fall between lines, depending on your scale. Use different colors for each bar if you would like.



Review

1. What fraction of each word is made up of the letter I?

HAIKU $\frac{1}{5}$ MINI $\frac{2}{4}$

DIVISION $\frac{3}{8}$ HAWAII $\frac{2}{6}$

2. Complete each division problem. Use scratch paper if you need more room.

$4\overline{)56}\ 14$ $7\overline{)98}\ 14$ $5\overline{)85}\ 17$

$6\overline{)78}\ 13$ $3\overline{)42}\ 14$ $2\overline{)92}\ 46$ $3\overline{)63}\ 21$ $4\overline{)72}\ 18$

1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

Repeat

3. Add or subtract the fractions. Hint: Add or subtract the numerators, but the denominators stay the same.

$\frac{3}{6}+\frac{2}{6}=\frac{5}{6}$ $\frac{8}{13}+\frac{3}{13}=\frac{11}{13}$ $\frac{6}{8}+\frac{1}{8}=\frac{7}{8}$ $\frac{9}{20}+\frac{7}{20}=\frac{16}{20}$ $\frac{5}{6}+\frac{1}{6}=\frac{6}{6}$

$\frac{8}{12}-\frac{4}{12}=\frac{4}{12}$ $\frac{2}{3}-\frac{1}{3}=\frac{1}{3}$ $\frac{12}{15}-\frac{8}{15}=\frac{4}{15}$ $\frac{6}{10}-\frac{3}{10}=\frac{3}{10}$ $\frac{9}{12}-\frac{8}{12}=\frac{1}{12}$

4. List the factors of 9.

1, 3, 9

5. List the factors of 30.

1, 2, 3, 5, 6, 10, 15, 30

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set D quiz in Lesson 49. Then complete the problems in this section.

12 × 3 = 36	12 × 12 = 144	12 × 8 = 96	12 × 5 = 60	12 × 11 = 132	12 × 7 = 84	12 × 4 = 48	12 × 9 = 108	12 × 6 = 72
9 × 12 = 108	3 × 12 = 36	11 × 12 = 132	8 × 12 = 96	5 × 12 = 60	6 × 12 = 72	4 × 12 = 48	7 × 12 = 84	2 × 12 = 24

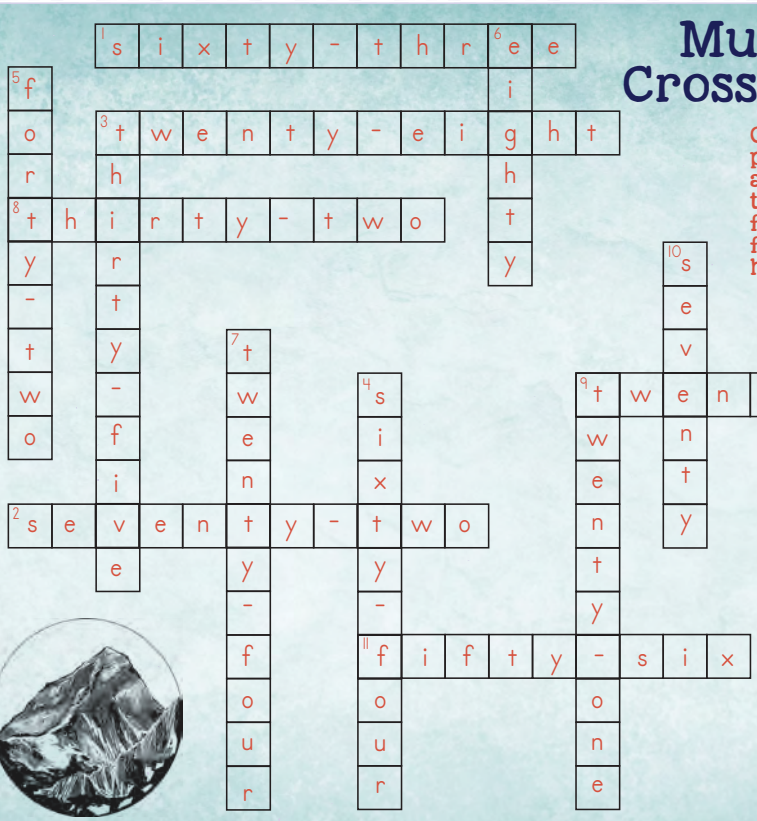
Lesson Practice

$3\overline{)336}\ 112$ $6\overline{)186}\ 31$ $4\overline{)168}\ 42$ $2\overline{)148}\ 74$ $5\overline{)255}\ 51$

$3\overline{)126}\ 42$ $4\overline{)248}\ 62$ $7\overline{)147}\ 21$ $6\overline{)486}\ 81$ $2\overline{)184}\ 92$

Multiplication Crossword Review

Complete the multiplication problems and write the answers in word form in the crossword puzzle. The first one has been done for you. Don't forget the hyphens!



Across

1. 9 x 7
2. 8 x 9
3. 4 x 7
8. 8 x 4
9. 2 x 10
11. 7 x 8

Down

3. 5 x 7
4. 8 x 8
5. 6 x 7
6. 10 x 8
7. 3 x 8
9. 3 x 7
10. 7 x 10

Lesson Practice

PRIME or COMPOSITE

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	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Remember, a prime number can only be divided evenly by itself and one. Follow the directions below to color each **prime number blue** and each **composite number green** on the hundred chart.

1. The number 1 is neither prime nor composite. Color it yellow.
2. The number 2 is a prime number. Color it blue. Two is the only even prime number. Every other even number is composite. Color the other even numbers on the chart green.
3. The number 3 is a prime number. Color it blue. Every other multiple of 3 is a composite number. Skip count by 3s, coloring each multiple of 3 green if it's not already colored.
4. The number 5 is a prime number. Color it blue. Every other multiple of 5 is a composite number. Color them green. (Multiples of 5 end in 5 or 0.)
5. The number 7 is a prime number. Color it blue. Every other multiple of 7 is a composite number. Skip count by 7s, coloring each multiple of 7 green if it's not already colored.
6. Every remaining number is a prime number. Color them blue. There should be 25 prime numbers on the chart.

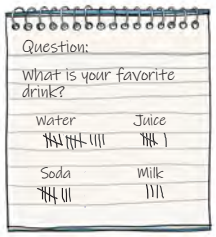
Review

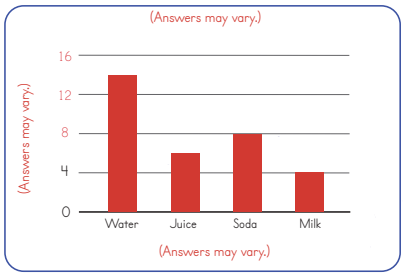
1. Complete each division problem. Use scratch paper if you need more room.

$4\overline{)164}$ = 41 $\quad 3\overline{)216}$ = 72 $\quad 2\overline{)484}$ = 242 $\quad 6\overline{)186}$ = 31

1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

Repeat





2. Gabriella conducted a survey of the kids in her church class. Use the information she gathered above to complete the bar graph.
   a. Finish numbering the lines of the graph.
   b. Add a title to the graph.
   c. Add labels to both sides of the bar graph.
   d. Add bars to the graph to represent the number of people who chose each drink.

Targeted Multiplication Fact Practice

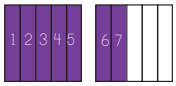
Practice any problems you missed in your Set D quiz in Lesson 49. Then complete the problems in this section.

6 × 10 = 60	11 × 8 = 88	6 × 12 = 72	12 × 1 = 12	3 × 5 = 15
12 × 8 = 96	12 × 9 = 108	7 × 12 = 84	5 × 12 = 60	9 × 5 = 45
12 × 7 = 84	12 × 5 = 60	8 × 12 = 96	12 × 6 = 72	5 × 4 = 20
9 × 9 = 81	4 × 12 = 48	12 × 11 = 132	9 × 12 = 108	7 × 9 = 63
8 × 4 = 32	12 × 3 = 36	11 × 12 = 132	12 × 4 = 48	8 × 3 = 24
8 × 7 = 56	12 × 12 = 144	3 × 12 = 36	9 × 6 = 54	9 × 8 = 72

Lesson Practice

1. Convert each improper fraction to a mixed number by filling in the missing information. The first one has been given as an example.

$\frac{11}{4} = 1 + 1 + \frac{3}{4} = 2\frac{3}{4}$



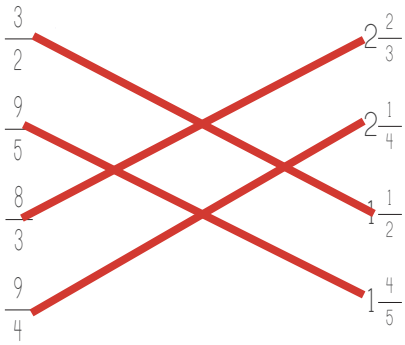
$\frac{7}{5} = 1 + \frac{2}{5} = 1\frac{2}{5}$

$\frac{5}{2} = 1 + 1 + \frac{1}{2} = 2\frac{1}{2}$

$\frac{10}{3} = 1 + 1 + 1 + \frac{1}{3} = 3\frac{1}{3}$

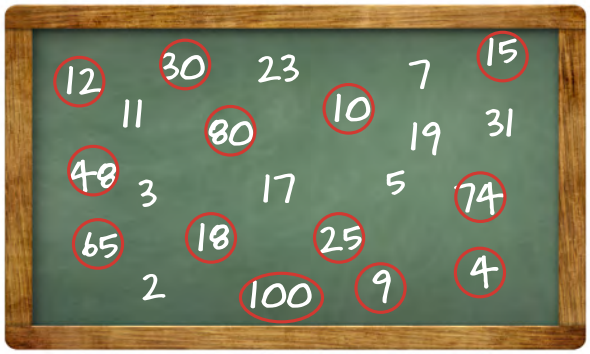
$\frac{28}{6} = 1 + 1 + 1 + 1 + \frac{4}{6} = 4\frac{4}{6}$

2. Draw a line from the improper fraction to the correct mixed number.



Review

1. Circle all the composite numbers on the board. There are 13.



2. List the composite numbers you found above in order from least to greatest. Then circle all the odd composite numbers listed below.

4, (9), 10, 12, (15), 18, (25), 30, 48, (65), 74, 80, 100

3. Complete each division problem on scratch paper.

$6\overline{)246} = 41$ $\quad 4\overline{)168} = 42$

$3\overline{)219} = 73$ $\quad 7\overline{)357} = 51$

1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

Repeat

4. Ralph and Ernesto are collecting rocks for a rock collection. Today at the park, they found 4 black rocks and 6 shiny multicolored rocks. What fraction of their rock collection is made up of black rocks?

$\frac{4}{10}$

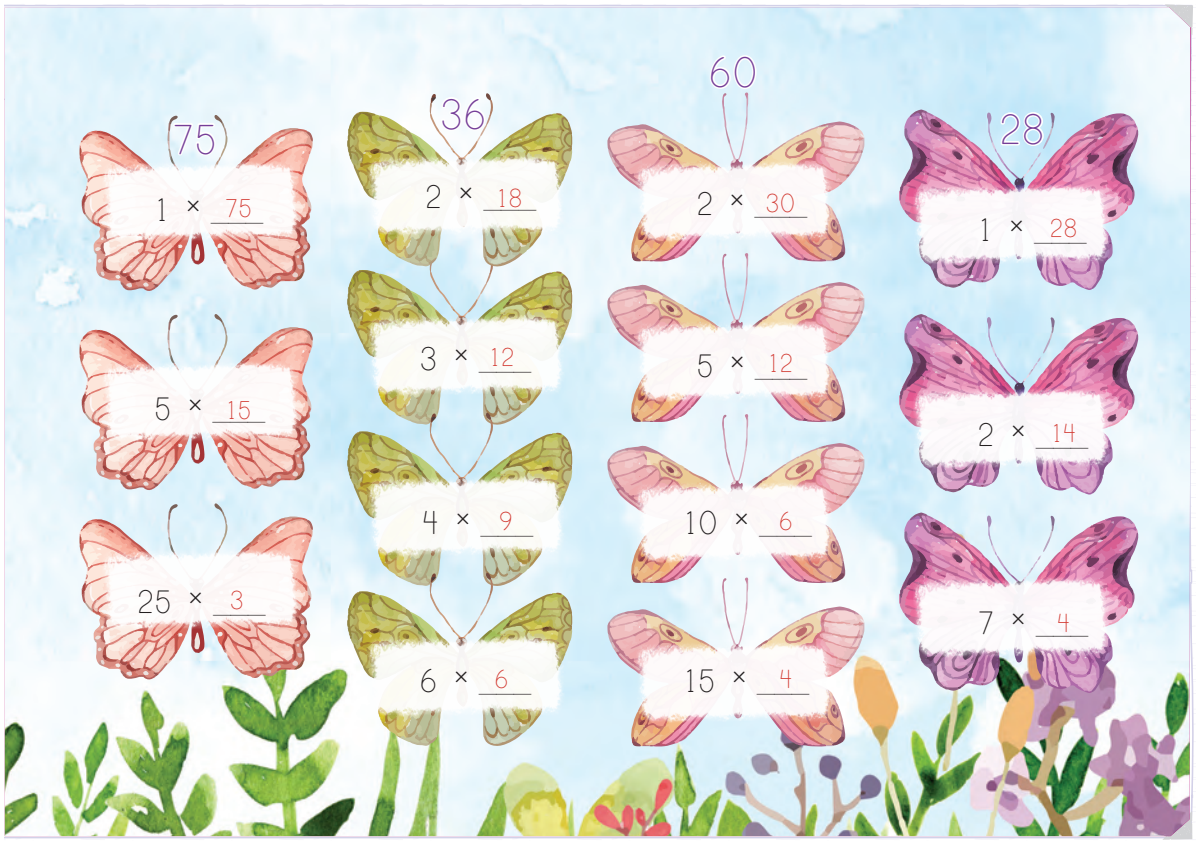
Targeted Multiplication Fact Practice

Practice any problems you missed in your Set D quiz in Lesson 49. Then complete the problems in this section.

12 × 3 = 36	4 × 8 = 32	12 × 8 = 96	7 × 3 = 21	8 × 6 = 48	9 × 9 = 81	12 × 4 = 48	12 × 11 = 132	12 × 6 = 72	12 × 12 = 144	12 × 5 = 60	12 × 7 = 84	12 × 9 = 108
9 × 12 = 108	6 × 3 = 18	11 × 12 = 132	3 × 3 = 9	5 × 12 = 60	5 × 7 = 35	4 × 12 = 48	7 × 12 = 84	2 × 12 = 24	6 × 7 = 42	3 × 12 = 36	8 × 12 = 96	6 × 12 = 72

Better Butterflies

Find the missing factor on each butterfly for the number at the top of the column. Use your multiplication facts or long division on scratch paper, if necessary.
Note: Not every factor is shown for each number.



Targeted Multiplication Fact Practice

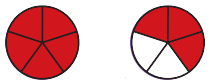
Practice any problems you missed in your Set D quiz in Lesson 49. Then complete the problems in this section.

6 × 10 = 60	11 × 8 = 88	6 × 12 = 72	7 × 1 = 7	9 × 9 = 81
12 × 8 = 96	12 × 9 = 108	7 × 12 = 84	5 × 12 = 60	7 × 4 = 28
12 × 7 = 84	12 × 5 = 60	8 × 12 = 96	12 × 6 = 72	5 × 8 = 40
8 × 4 = 32	4 × 12 = 48	12 × 11 = 132	9 × 12 = 108	8 × 6 = 48
3 × 8 = 24	12 × 3 = 36	11 × 12 = 132	12 × 4 = 48	5 × 6 = 30
3 × 9 = 27	12 × 12 = 144	3 × 12 = 36	8 × 3 = 24	6 × 9 = 54

Review

1. Shade each picture to represent the improper fraction, and then fill in the missing information.

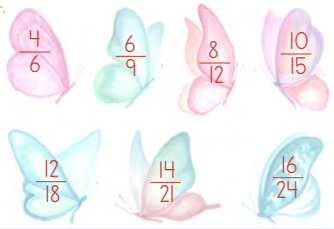
$\frac{14}{6} = \frac{1}{1} + \frac{1}{1} + \frac{2}{6} = 2\frac{2}{6}$



$\frac{8}{5} = \frac{1}{1} + \frac{3}{5} = 1\frac{3}{5}$

2. Write a fraction equivalent to $\frac{2}{3}$ on each butterfly. Hint: You can create equivalent fractions by multiplying the numerator and denominator by the same number.

Answers will vary. Some possible answers are shown.



Hint: If you have multiplication and division OR addition and subtraction in the same problem, complete them going from left to right.

3. Complete each problem using the order of operations. Use scratch paper if you need more room.

$3^2 - (2 \times 4) = 1$

$21 \div 3 - (15 \div 3) = 2$

$12 - (15 - 9) + 2 = 8$

$27 \div 3^2 \times 2 = 6$

4. Add or subtract the fractions.

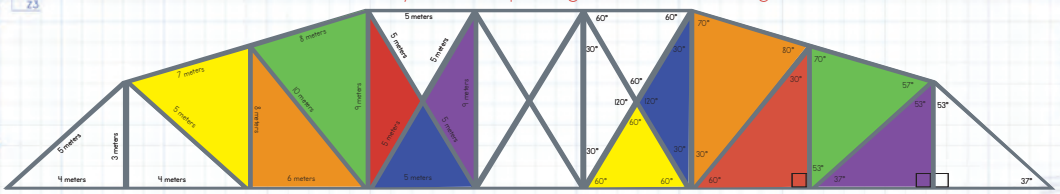
$\frac{4}{7} + \frac{5}{7} = \frac{9}{7}$

$\frac{6}{10} - \frac{3}{10} = \frac{3}{10}$

$\frac{1}{4} + \frac{3}{4} = \frac{4}{4}$

BUILDING BRIDGES

Answers will vary. An example is given for each triangle.



This bridge has many different types of triangles. The triangles on the left side of the bridge show side lengths. The triangles on the right side of the bridge show angle measures. Find each type of triangle described below and, using colored pencils, color one triangle on the bridge for each description.
NOTE: Triangles may not be drawn to scale.

By Side

This **SCALENE** triangle has two sides that measure 10 meters and 9 meters. Color this triangle GREEN.

This **ISOSCELES** triangle has two sides that measure 5 meters. Color this triangle RED.

This **EQUILATERAL** triangle has equal sides that measure 5 meters. Color this triangle BLUE.

This **SCALENE** triangle has two sides that measure 7 meters and 8 meters. Color this triangle YELLOW.

This **SCALENE** triangle has two sides that measure 6 meters and 8 meters. Color this triangle ORANGE.

This **ISOSCELES** triangle has two sides that measure 5 meters. Color this triangle PURPLE.

By Angle

This **ACUTE** triangle has an angle that measures 57° and an angle that measures 70°. Color this triangle GREEN.

This **RIGHT** triangle has an angle that measures 30° and an angle that measures 60°. Color this triangle RED.

This **OBTUSE** triangle has an angle that measures 120°. Color this triangle BLUE.

This **ACUTE** triangle has three angles that measure 60°. Color this triangle YELLOW.

This **ACUTE** triangle has an angle that measures 80° and an angle that measures 30°. Color this triangle ORANGE.

This **RIGHT** triangle has an angle that measures 53° and an angle that measures 37°. Color this triangle PURPLE.

1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

(Repeat)

1. Complete the problems.

$$8\overline{)488} = 61 \qquad 9\overline{)549} = 61$$

346 × 2	951 × 7	582 × 3
692	6,657	1,746

2. Devin made a mistake when completing the division problem below. Can you find his mistake? Once you do, complete the problem correctly.

He forgot to bring down the 8.

$$6\overline{)684} = 14 \quad (-6,\ 24,\ -24,\ 0)$$

$$6\overline{)684} = 114 \quad (-6,\ 08,\ -6,\ 24,\ -24,\ 0)$$

Review

3. Fill in the missing numerators and denominators to make fractions equal to $\frac{1}{2}$.

$\frac{9}{18}$ $\frac{3}{6}$ $\frac{13}{26}$ $\frac{15}{30}$ $\frac{6}{12}$ $\frac{2}{4}$ $\frac{4}{8}$ $\frac{1}{2}$ $\frac{8}{16}$ $\frac{20}{40}$ $\frac{12}{24}$

4. Fill in the missing information to make equivalent fractions.

$\frac{3}{4} \overset{\times 2}{=} \frac{6}{8}$ $\frac{3}{4} \overset{\times 4}{=} \frac{12}{16}$ $\frac{3}{4} \overset{\times 5}{=} \frac{15}{20}$ $\frac{3}{4} \overset{\times 3}{=} \frac{9}{12}$

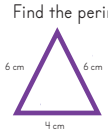
Targeted Multiplication Fact Practice

Practice any problems you missed in your Set D quiz in Lesson 49. Then complete the problems in this section.

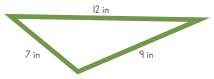
12 × 3	12 × 12	12 × 8	12 × 5	12 × 11	12 × 7	12 × 4	12 × 9	12 × 6
36	144	96	60	132	84	48	108	72
9 × 12	3 × 12	11 × 12	8 × 12	5 × 12	6 × 12	4 × 12	7 × 12	2 × 12
108	36	132	96	60	72	48	84	24

Lesson Practice

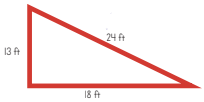
1. Find the perimeter of each triangle below.



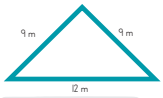
16 cm



28 in

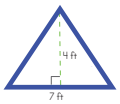


55 ft

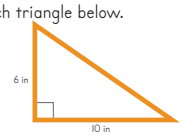


30 m

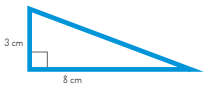
2. Find the area of each triangle below.



14 sq ft



30 sq in

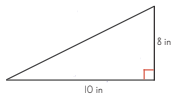


12 sq cm

27 sq in

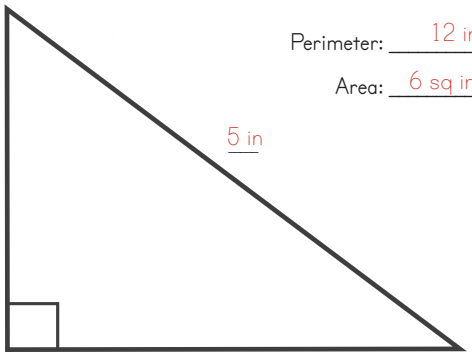
3. Joe, Myra, and Dorothea each drew a triangle. The area of each person's triangle is shown next to his or her name. Find the area of each triangle. Then write the name of each person under the correct triangle.

Joe - 32 sq in
Myra - 40 sq in
Dorothea - 15 sq in



Name Myra Name Dorothea Name Joe

4. Use your 12-inch ruler to measure all three sides of this triangle to the nearest inch. Label each side, and then find the perimeter and the area.



Perimeter: 12 in

Area: 6 sq in

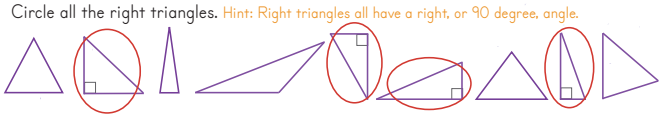
5 in

height: 3 in

base: 4 in

Review

1. Circle all the right triangles. Hint: Right triangles all have a right, or 90 degree, angle.



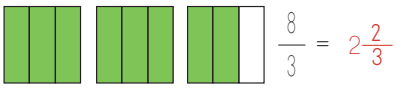
2. Find the missing factors; use long division if necessary.

84	63	40
2 × 42	1 × 63	2 × 20
4 × 21	3 × 21	5 × 8
6 × 14	9 × 7	10 × 4

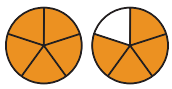
1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

Repeat

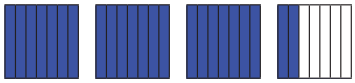
3. Convert the improper fractions to mixed numbers.



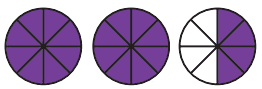
$\frac{8}{3} = 2\frac{2}{3}$



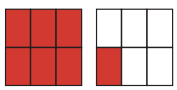
$\frac{9}{5} = 1\frac{4}{5}$



$\frac{23}{7} = 3\frac{2}{7}$



$\frac{20}{8} = 2\frac{4}{8}$



$\frac{7}{6} = 1\frac{1}{6}$

Targeted Multiplication Fact Practice

Practice any problems you missed in your Set D quiz in Lesson 49. Then complete the problems in this section.

6 × 7 = 42	10 × 6 = 60	6 × 12 = 72	4 × 11 = 44	3 × 3 = 9
12 × 8 = 96	12 × 9 = 108	7 × 12 = 84	5 × 12 = 60	9 × 8 = 72
12 × 7 = 84	12 × 5 = 60	8 × 12 = 96	12 × 6 = 72	3 × 6 = 18
5 × 7 = 35	4 × 12 = 48	12 × 11 = 132	9 × 12 = 108	7 × 6 = 42
5 × 5 = 25	12 × 3 = 36	11 × 12 = 132	12 × 4 = 48	4 × 9 = 36
3 × 8 = 24	12 × 12 = 144	3 × 12 = 36	8 × 6 = 48	7 × 9 = 63

Step Right Up Guess My Name Step Right Up

Welcome to the carnival! You are the guesser for a game called "Guess My Name." You already know the ages of all the children shown above, and you have to guess each child's name. Solve the story problems presented by each mystery child below. When you find how old a child is, write the name above the correct child.

Sam turned 8 years old 2 years ago. If his birthday was yesterday, how old is Sam today?

Sam's age: 8 + 2 = 10

Kirk is 5 years younger than Sam. Miguel is 2 years older than Kirk. How old are Miguel and Kirk?

Kirk's age: 10 − 5 = 5

Miguel's age: 5 + 2 = 7

Scott is 1 year older than Miguel. Lena is half the age of Scott. How old are Scott and Lena?

Scott's age: 7 + 1 = 8

Lena's age: 8 ÷ 2 = 4

Sarah is 1 year younger than Lena. Rosie is 3 times as old as Sarah. How old are Sarah and Rosie?

Sarah's age: 4 − 1 = 3

Rosie's age: 3 × 3 = 9

Challenge Problem

Nathan's little sister, Denise, is 3 years younger than he is. His brother, Robert, is 3 times as old as Denise.

If Robert is 12 years old, is Nathan 6, 7, or 8 years old?

7

How old is Denise? 4

Review

1. Find the perfect squares.

$4^2 = 16$ $3^2 = 9$ $6^2 = 36$

2. Convert each problem from factored form to exponent form.

4 x 4 = 4^2

3 x 3 x 3 x 3 = 3^4

7 x 7 x 7 x 7 x 7 = 7^5

6 x 6 x 6 x 6 x 6 x 6 x 6 = 6^7

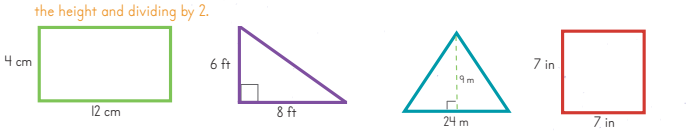
3. Complete each problem.

$3\overline{)423}$ = 141 $6\overline{)966}$ = 161 $8\overline{)328}$ = 41

$5\overline{)215}$ = 43 $7\overline{)266}$ = 38 $4\overline{)252}$ = 63

See the Reference Guide on page 394.

4. Find the area of each shape. Hint: Find the area of a triangle by multiplying the base by the height and dividing by 2.



48 sq cm | 24 sq ft | 108 sq m | 49 sq in

5. Add or subtract the fractions below.

$\frac{8}{12} + \frac{3}{12} = \frac{11}{12}$ $\frac{7}{8} - \frac{3}{8} = \frac{4}{8}$ $\frac{5}{6} + \frac{1}{6} = \frac{6}{6}$

Read with your parent or teacher

It's time to take your next Multiplication Mastery Assessment. Have your parent or teacher quiz you on Multiplication Set D using the Multiplication Mastery Chart on page 395.

Parent/Teacher: Indicate which facts from Set D your student has mastered in the "Mastered" column on page 395.

Students will continue to practice all of their multiplication facts throughout Unit 3, but will not be prompted to practice the sets daily. If your student has not passed off all the facts, continue to work with him or her to pass them off. In Unit 4 you will be prompted to review the sets using the Multiplication Mastery Chart.

$$\begin{array}{r} 13 \\ 3\overline{)39} \\ -3\downarrow \\ \hline 09 \end{array}$$

DIVIDE: 9 ones into the 3 groups.

$$\begin{array}{r} 13 \\ 3\overline{)39} \\ -3\downarrow \\ \hline 09 \\ 9 \end{array}$$

MULTIPLY: 3 groups of 3 ones equals 9 ones.

$$\begin{array}{r} 13 \\ 3\overline{)39} \\ -3\downarrow \\ \hline 09 \\ -9 \\ \hline 0 \end{array}$$

SUBTRACT: The 9 ones we started with minus the 9 ones we divided equals zero.

BRING DOWN: There are no digits left to bring down and no blocks left to divide. The quotient is 13.

To check the answer, you can use multiplication, the inverse operation of division. Multiply the divisor by the quotient. If the product is the same as the dividend, the answer is correct.

multiply → Quotient
Divisor ⟌ Dividend

$$3\overline{)39} \qquad 13$$

$$13 \times 3 = 39$$

MATH CONTEST TODAY

1. The students below are competing in a math contest, and each completed a long division problem. You are the judge and need to determine if each answer is correct. Use **multiplication** to check each student's answer and circle right or wrong next to his or her picture.

$$8\overline{)544} \qquad 68$$

RIGHT OR (WRONG)

$$68 \times 8 = 544$$

$$4\overline{)336} \qquad 79$$

RIGHT OR (WRONG)

$$79 \times 4 = 316$$

$$51 \times 6 = 306$$

$$6\overline{)312} \qquad 51$$

RIGHT OR (WRONG)

$$38 \times 7 = 266$$

$$7\overline{)266} \qquad 38$$

(RIGHT) OR WRONG

$$9\overline{)405} \qquad 45$$

RIGHT OR (WRONG)

$$45 \times 9 = 405$$

$$5\overline{)310} \qquad 64$$

RIGHT OR (WRONG)

$$64 \times 5 = 320$$

MATH MAZE MADNESS

Start at the top left lily pad. Complete the problem on the first lily pad, and then follow the correct answer to the next lily pad. Continue until you get to the finish at the top right. If you reach a dead end, retrace your steps and check your work.

Start

16 c =

1 gal

15 × 00 =

150

$7\overline{)417}$

8

$2^2 - (7 - 3) =$

12

4 pt

1,500

22

$\frac{3}{4}$

$7 \times 1000 =$

2 L

23,000 mL =

230 L

$4^2 =$

$\frac{4}{8}$

$\frac{2}{5}$ =

$\frac{6}{15}$

75

23 L

42 ft

49

5 in

5 in

area =

$\frac{1}{3}$

$\frac{1}{2}$ =

$\frac{3}{6}$

6 ft

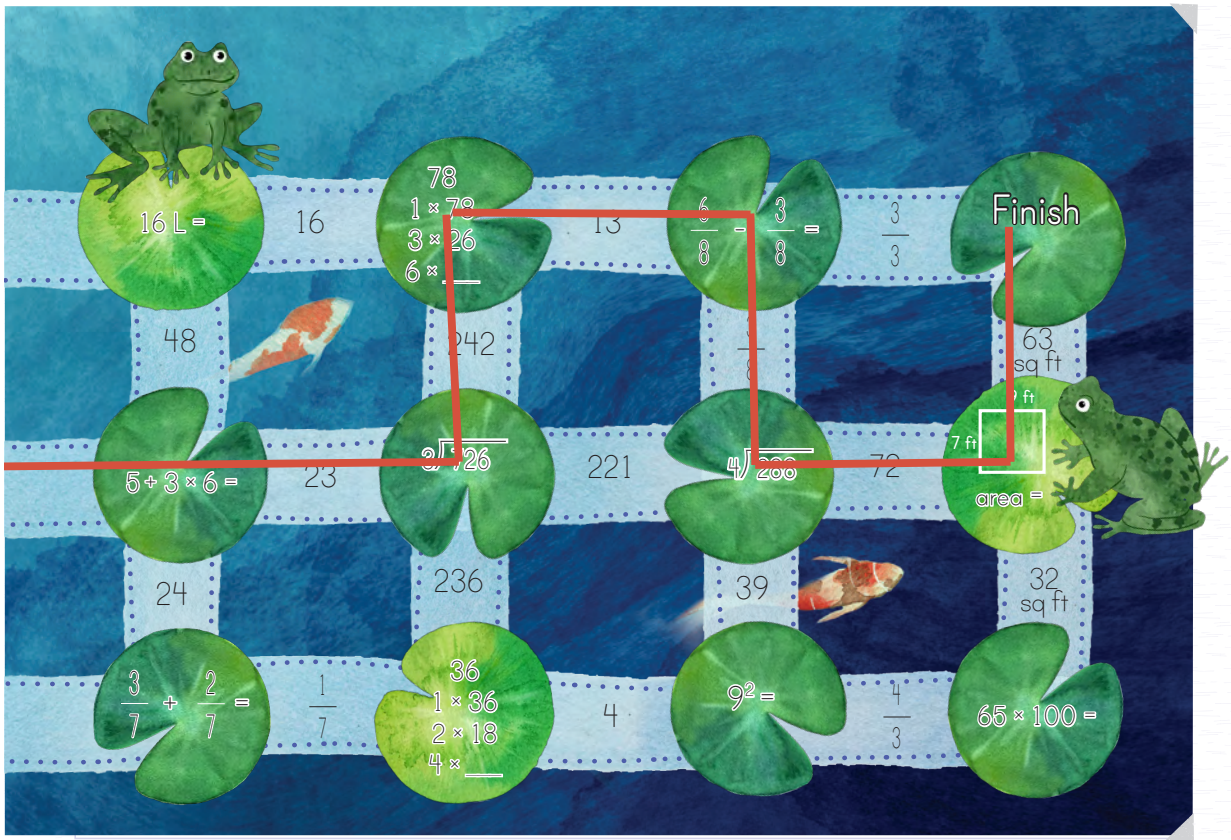
7 ft

perimeter =

26 ft

7^2 =

18



LESSONS 59-60

UNIT ASSESSMENT

Parent/Teacher

Read the following information aloud to the child: Unit assessments give you practice with the mathematical concepts learned in this course without having you overpractice concepts that you have mastered. These assessments also give you practice working on exercises for an extended period of time. This helps you to 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 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. Finally, if you feel you are having trouble focusing, take a quick break to do something else, like ten jumping jacks. There are no videos for Lessons 59–60.

For Lesson 59, complete all the exercises with PURPLE headers ONLY. Your parent or teacher will correct the work. If you make one or more mistakes in a section, your parent or teacher will check the orange "Additional Practice" checkbox for that section.

For Lesson 60, review any mini lessons or videos about topics you missed, and then complete all the orange sections **that are checked**. All the principles will be reviewed again in future units. If you have only a few or no orange sections to practice, you may move on to the next unit.

Student

EXPONENTS & PERFECT SQUARES (LESSON 37)

Convert each problem from factored form to exponent form.

$12 \times 12 \times 12 =$ 12^3 $\quad 4 \times 4 \times 4 \times 4 \times 4 \times 4 =$ 4^6

$7 \times 7 \times 7 \times 7 \times 7 =$ 7^5 $\quad 6 \times 6 \times 6 \times 6 =$ 6^4

Fill in the perfect squares in the charts. The first one has been done.

4^2	16
8^2	64
1^2	1

6^2	36
9^2	81
2^2	4

3^2	9
5^2	25
7^2	49

Additional Practice

Convert each problem from exponent form to factored form.

$10^3 =$ 10 x 10 x 10 $\quad 6^8 =$ 6 x 6 x 6 x 6 x 6 x 6 x 6 x 6

$4^5 =$ 4 x 4 x 4 x 4 x 4 $\quad 2^2 =$ 2 x 2

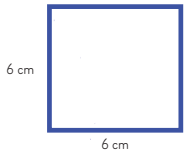
Fill in the missing information. Example: $2^2 = 2 \times 2 = 4$

$5^2 =$ 5 x 5 = 25 $\quad 7^2 =$ 7 x 7 = 49

$3^2 =$ 3 x 3 = 9 $\quad 9^2 =$ 9 x 9 = 81

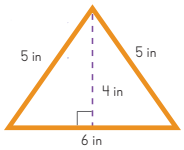
PERIMETER & AREA
(LESSONS 36 & 56)

Write the area and perimeter beneath each shape.

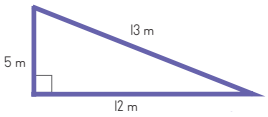


Area = 36 sq cm
Perimeter = 24 cm

Area = 48 sq ft
Perimeter = 32 ft



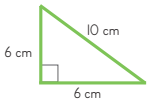
Area = 12 sq in
Perimeter = 16 in



Area = 30 sq m
Perimeter = 30 m

Find the area of each shape.

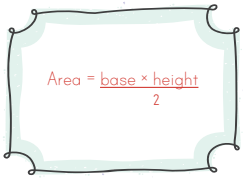
Area = 48 sq in



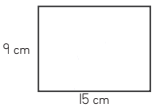
Area = 18 sq cm

Additional Practice

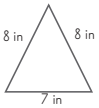
In the box on the left, write the formula for finding the area of a rectangle. In the box on the right, write the formula for finding the area of a triangle. Refer to Lessons 36 and 56 if necessary.



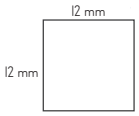
Find the perimeter of each shape.



Perimeter = 48 cm

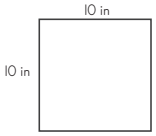


Perimeter = 23 in

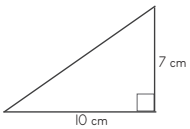


Perimeter = 48 mm

Find the area of each shape.



Area = 100 sq in



Area = 35 sq cm

Area = 36 sq ft

ORDER OF OPERATIONS
(LESSON 40)

Complete each problem using the order of operations. Use scratch paper if you need more room.

$8 + 2^2 - (3 \times 3) = 3$

$40 \div 4 - (18 \div 2) = 1$

$12 + (14 - 6) \times 2 = 28$

$42 - 6^2 + (4 \times 7) = 34$

Additional Practice

Write the phrase used to help remember the order of operations.

P L E A S E E X C U S E M Y
D E A R A U N T S A L L Y .

Complete each problem using the order of operations. Use scratch paper if you need more room.

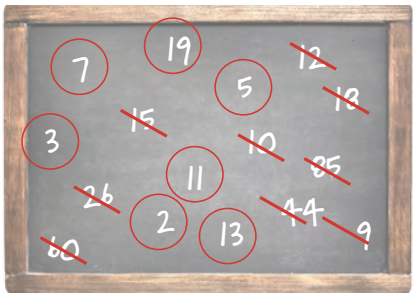
$(28 + 7) \div 5 + 11 = 18$

$16 - 4^2 + (6 \times 8) = 48$

$24 + (16 - 8) \times 2 = 40$

PRIME & COMPOSITE NUMBERS (LESSON 52)

Circle the prime numbers and cross out the composite numbers.



Additional Practice

Fill in the blank. Refer to Lesson 52 if necessary.

Prime numbers have exactly two whole number factors **: the number itself and the number 1.**

List all the prime numbers from 2 to 20. There are 8 in total.

2	3	5	7	11	13	17	19

FRACTIONS
(LESSONS 35 & 48)

Write a fraction equivalent to $\frac{1}{2}$ on each snowflake.
Answers will vary. Some examples are shown.

What fraction of the Christmas ornaments have snowflakes?

$\frac{3}{5}$

What fraction of the Christmas ornaments do not have stripes?

$\frac{2}{3}$

Complete the following problems.

$\frac{5}{9} + \frac{3}{9} = \frac{8}{9}$ $\quad \frac{8}{12} - \frac{7}{12} = \frac{1}{12}$ $\quad \frac{6}{7} + \frac{1}{7} = \frac{7}{7} = 1$

Additional Practice

Fill in the missing information to make equivalent fractions.

$\frac{2}{3} \overset{\times 2}{=} \frac{4}{6}$ $\quad \frac{2}{3} \overset{\times 4}{=} \frac{8}{12}$ $\quad \frac{2}{3} \overset{\times 5}{=} \frac{10}{15}$

Three-sevenths of the Christmas trees have yellow stars. What fraction of the Christmas trees have red stars?

$\frac{4}{7}$

One-third of the trees are decorated with candles. What fraction of the trees are not decorated with candles?

$\frac{2}{3}$

Complete the following problems.

$\frac{3}{4} - \frac{2}{4} = \frac{1}{4}$ $\quad \frac{4}{15} + \frac{5}{15} = \frac{9}{15}$ $\quad \frac{5}{8} - \frac{1}{8} = \frac{4}{8}$

VOLUME CONVERSIONS
(LESSONS 31 & 33)

Fill in the missing information.

Hint: Picture the G in your head to help remember the conversions.

1 L = 1,000 mL

1 gal = 4 qt = 8 pt = 16 c

7,000 mL = 7 L

23 L = 23,000 mL

12 c = 6 pt

3 gal = 12 qt

Additional Practice

Circle the greatest volume in each box.

14 L 2,000 mL **24,000 mL** 6 L	4 gal **17 qt** 7 pt 12 c
32 c 4 pt 8 qt **3 gal**	62 L **63,000 mL** 11,000 mL 10 L

LONG DIVISION
(LESSONS 41, 47 & 51)

Complete each problem on scratch paper.

$63 \overline{)189}$ $\quad 51 \overline{)357}$ $\quad 121 \overline{)484}$ $\quad 61 \overline{)549}$

$21 \overline{)126}$ $\quad 314 \overline{)628}$ $\quad 51 \overline{)255}$ $\quad 92 \overline{)276}$

Additional Practice

Fill in the four steps of long division in the box to the right. Then complete the division problems on scratch paper.

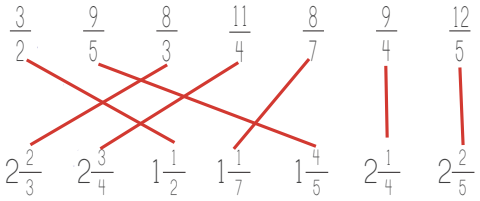
1. Divide
2. Multiply
3. Subtract
4. Bring Down

(Repeat)

$231 \overline{)693}$ $\quad 41 \overline{)328}$ $\quad 71 \overline{)497}$ $\quad 32 \overline{)128}$

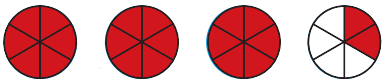
IMPROPER FRACTIONS & MIXED NUMBERS (LESSON 53)

Draw a line from the improper fraction to the correct mixed number.



Shade the shapes to show each improper fraction, and then convert it to a mixed number.

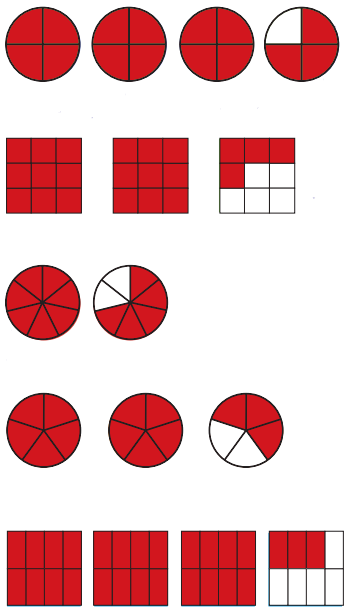
$\frac{7}{3} = 1 + 1 + \frac{1}{3} = 2\frac{1}{3}$



$\frac{20}{6} = 1 + 1 + 1 + \frac{2}{6} = 3\frac{2}{6}$

Additional Practice

Shade the shapes to show each improper fraction. Then write the mixed number.



$\frac{15}{4} = 3\frac{3}{4}$

$\frac{22}{9} = 2\frac{4}{9}$

$\frac{12}{7} = 1\frac{5}{7}$

$\frac{13}{5} = 2\frac{3}{5}$

$\frac{27}{8} = 3\frac{3}{8}$

MULTIPLES & FACTOR PAIRS (LESSONS 42 & 54)

List the next six multiples of each number below.

12	24	36	48	60	72	84
8	16	24	32	40	48	56
25	50	75	100	125	150	175

Write all the factors for each number below.

16: 1, 2, 4, 8, 16

9: 1, 3, 9

24: 1, 2, 3, 4, 6, 8, 12, 24

Find the missing factors; use long division if necessary.

48	96	60
2 × 24	1 × 96	2 × 30
4 × 12	3 × 32	5 × 12
8 × 6	6 × 16	10 × 6

Additional Practice

On the hundred chart to the right, do the following:

Color all the multiples of 6 yellow.

Circle all the multiples of 15.

Cross out all the multiples of 20.

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	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Find the missing factors; use long division if necessary.

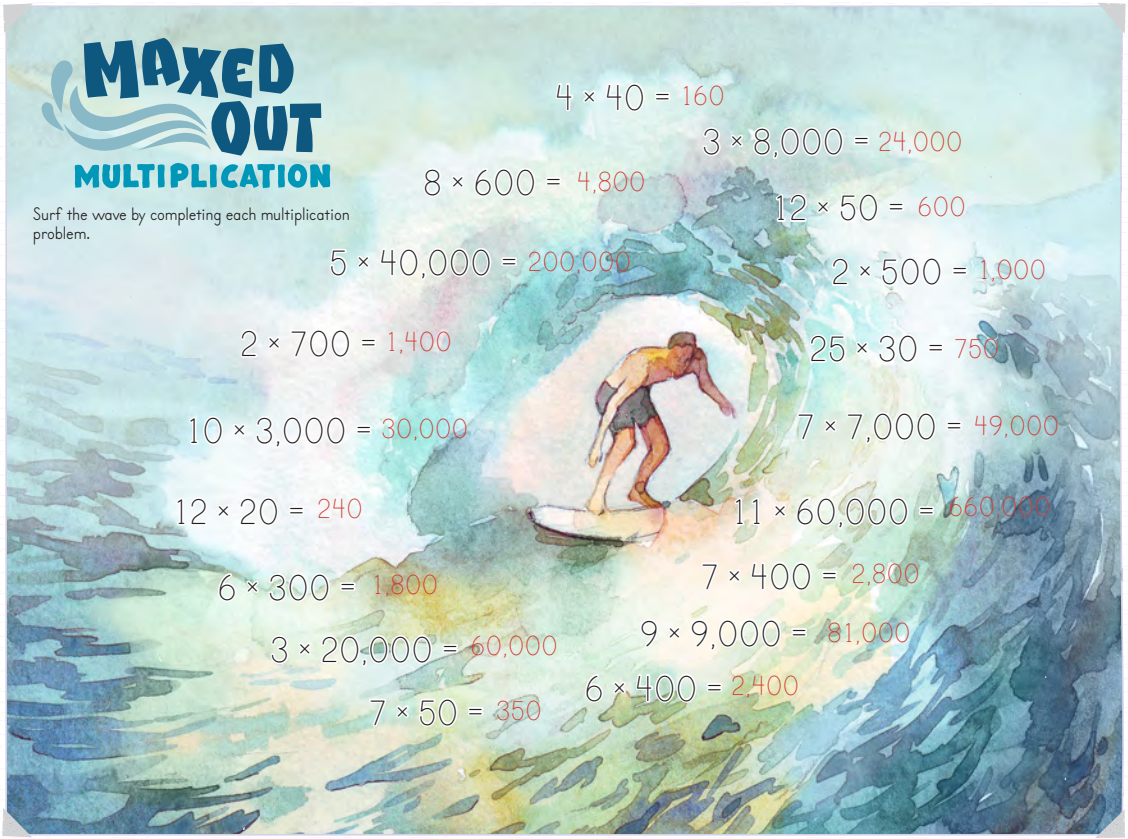
32	72	40
2 × 16	3 × 24	5 × 8
4 × 8	6 × 12	10 × 4

List all the factors of 18 from least to greatest.

18: 1, 2, 3, 6, 9, 18

MAXED OUT MULTIPLICATION

Surf the wave by completing each multiplication problem.



4 × 40 = 160

3 × 8,000 = 24,000

8 × 600 = 4,800

12 × 50 = 600

5 × 40,000 = 200,000

2 × 500 = 1,000

2 × 700 = 1,400

25 × 30 = 750

10 × 3,000 = 30,000

7 × 7,000 = 49,000

12 × 20 = 240

11 × 60,000 = 660,000

6 × 300 = 1,800

7 × 400 = 2,800

3 × 20,000 = 60,000

9 × 9,000 = 81,000

7 × 50 = 350

6 × 400 = 2,400

Review

1. Continue each number pattern.

3, 11, 19, 27, 35, 43, 51, 59, 67

1, 2, 4, 8, 16, 32, 64, 128

153, 156, 159, 162, 165, 168, 171

75, 66, 57, 48, 39, 30, 21, 12

2. Complete each problem to find the value of the letter.

25 + F = 47	58 - B = 12	36 + M = 6
F = 22	B = 46	M = 6
G + 16 = 39	12 × Z = 72	A × 9 = 54
G = 23	Z = 6	A = 6

3. Round each number to the nearest thousand.

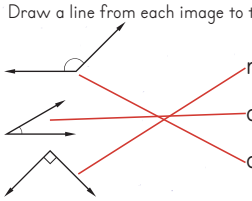
Hint: Underline the digit in the thousands place and circle the digit to the right.

12,287	3,877	647,515
12,000	4,000	648,000

4. Round each number to the nearest ten million.

34,147,362	756,942,025
30,000,000	760,000,000

5. Draw a line from each image to the angle type.



right

acute

obtuse

6. Jerry's plane leaves London at 5:42 AM and arrives in Paris at 10:31 AM. How long is the flight?

4 hours, 49 minutes

7. Compare the numbers and write a < or > symbol.

2,479,614 > 2,479,604

1,240,357 > 824,752

8. Complete each problem.

1,254,142	517	547,658
2,415	250,475	87,642
+ 84,574	6,344	3,510
1,341,131	+ 7	+ 604
	257,343	639,414

This shape has:
- 4 sides
- 2 pairs of parallel sides
- ALL sides are equal in length.
- 4 right angles
- This shape is RED.

This shape is a S Q U A R E (6)

This shape has:
- 4 sides
- 2 pairs of parallel sides
- Opposite sides are equal in length.
- 4 right angles
- This shape is YELLOW.

This shape is a R E C T A N G L E (4)

This shape has:
- 4 sides
- 1 pair of parallel sides
- This shape is YELLOW.

This shape is a T R A P E Z O I D (7)

This shape has:
- 4 sides
- 1 pair of parallel sides
- This shape is BLUE.

This shape is a T R A P E Z O I D (9)

This shape has:
- 4 sides
- 2 pairs of parallel sides
- Opposite sides are equal in length.
- NO right angles
- This shape is RED.

This shape is a P A R A L L E L O G R A M (5)

This shape has:
- 4 sides
- 2 pairs of parallel sides
- ALL sides are equal in length.
- NO right angles
- This shape is YELLOW.

This shape is a R H O M B U S (3)

This shape has:
- 4 sides
- 2 pairs of parallel sides
- Opposite sides are equal in length.
- 4 right angles
- This shape is BLUE.

This shape is a R E C T A N G L E (2)

This shape has:
- 4 sides
- 2 pairs of parallel sides
- ALL sides are equal in length.
- 4 right angles
- This shape is BLUE.

This shape is a S Q U A R E (1)

This shape has:
- 4 sides
- 1 pair of parallel sides
- This shape is RED.

This shape is a T R A P E Z O I D (10)

This shape has:
- 4 sides
- 2 pairs of parallel sides
- ALL sides are equal in length.
- NO right angles
- This shape is RED.

This shape is a R H O M B U S (8)

What quadrilateral can be used to catch the cat?

A	T	R	A	P	-	E	Z	O	I	D
1	2	3	4	5		6	7	8	9	10

Review

1. Talia is 6 years old. Her older brother, Loto, is three times Talia's age. Their sister Kalama is half of Loto's age. How old is Kalama?

   9 years old

2. Roger's family picked 89 apples from their apple tree. They used 43 apples to make applesauce. They gave half of the remaining apples to their neighbors, the Smiths. How many apples did they give to the Smiths?

   23 apples

3. Camila practiced her trombone for 273 minutes this week. Sofia practiced her guitar for 43 minutes every day for 5 days this week. Who practiced more this week, Camila or Sofia?

   Camila

4. Kaki had 60 crayons. Then he bought 8 new boxes of crayons. Each box has 24 crayons. How many crayons does Kaki have altogether?

   252 crayons

5. Louie baked 4 batches of 12 cookies. Then he divided the cookies evenly into 8 boxes. How many cookies are in each box?

   6 cookies

6. Keshawn and Paul have $42.50 to spend at the county fair. Keshawn spends $16.50 on cotton candy and milkshakes. Paul spends $14.00 to ride the Ferris wheel and the roller coaster. How much money do they have left to spend at the fair?

   $12

7. Create your own two-step story problem in the space below and have your teacher, parent, or sibling complete it.

   Answers will vary.

3	2	8	4	12	6	5	7	12	6	4	5	12	5	6
× 3	× 0	× 11	× 4	× 3	× 10	× 6	× 3	× 5	× 3	× 5	× 7	× 4	× 3	× 6
9	0	88	16	36	60	30	21	60	18	20	35	48	15	36

Lesson Practice

Complete each division problem.
Use scratch paper for more room.

$4\overline{)288} = 72$ $\quad 5\overline{)185} = 37$ $\quad 3\overline{)105} = 35$ $\quad 7\overline{)336} = 48$

$3\overline{)135} = 45$ $\quad 6\overline{)348} = 58$ $\quad 8\overline{)448} = 56$ $\quad 5\overline{)215} = 43$

$7\overline{)175} = 25$ $\quad 6\overline{)192} = 32$ $\quad 4\overline{)304} = 76$ $\quad 9\overline{)288} = 32$

Review

1. Read the clues to determine the name of the mystery shape.

I have 4 sides.
I have two sets of parallel sides.
I have 4 right angles.
My sides are not all the same length.

What am I? rectangle

What am I? trapezoid

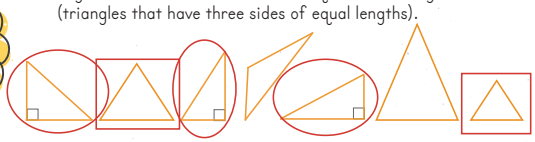
I have 4 sides.
I have one set of parallel sides.

2. Complete each problem. Use scratch paper if necessary.

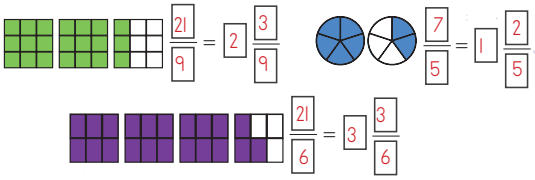
$12 \times 400 = 4{,}800$ $\quad 9 \times 3{,}000 = 27{,}000$
$4 \times 70{,}000 = 280{,}000$ $\quad 6 \times 500 = 3{,}000$
$8 \times 700 = 5{,}600$ $\quad 3 \times 800 = 2{,}400$

$\frac{2}{8} + \frac{4}{8} = \frac{6}{8}$ $\quad \frac{10}{12} - \frac{6}{12} = \frac{4}{12}$ $\quad \frac{25}{75} + \frac{15}{75} = \frac{40}{75}$ $\quad \frac{8}{10} + \frac{2}{10} = \frac{10}{10}$

3. Circle all the right triangles (triangles that have a right angle). Draw a box around all the equilateral triangles (triangles that have three sides of equal lengths).



4. Write the improper fraction, and then convert it to a mixed number.



$\frac{21}{9} = 2\frac{3}{9}$ $\quad \frac{7}{5} = 1\frac{2}{5}$ $\quad \frac{21}{6} = 3\frac{3}{6}$

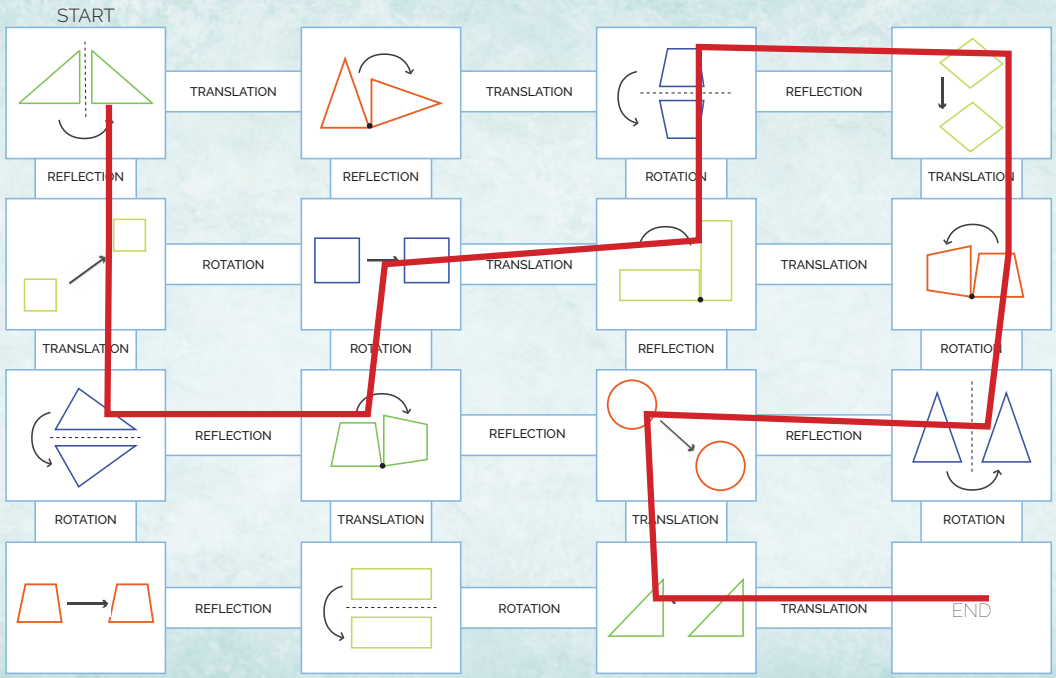
5. Find the missing factors for 84. Use long division if necessary.

1×84 $\quad 4 \times 21$
2×42 $\quad 6 \times 14$
3×28 $\quad 7 \times 12$

8 × 4 = 32	6 × 0 = 0	8 × 8 = 64	3 × 4 = 12	6 × 11 = 66	7 × 4 = 28	3 × 10 = 30	12 × 8 = 96	8 × 7 = 56	6 × 8 = 48	12 × 7 = 84	7 × 6 = 42	7 × 7 = 49	12 × 6 = 72	8 × 5 = 40

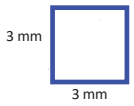
TRANSFOR MAZES

Can you make it through the transfor-maze? Begin at the box labeled START. Figure out which transformation is being shown in the box. Then pick the path with that transformation listed. Continue through the maze like this until you reach the box labeled END.



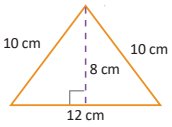
Review

1. Find the perimeter and area of each shape.

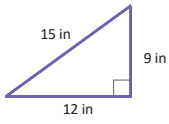


Area = 9 sq mm
Perimeter = 12 mm

Area = 16 sq ft
Perimeter = 20 ft



Area = 48 sq cm
Perimeter = 32 cm



Area = 54 sq in
Perimeter = 36 in

See the Reference Guide on page 394.

2. Complete each problem. Use scratch paper if necessary.

$3\overline{)186}$ = 62 $\quad 6\overline{)546}$ = 91 $\quad 9\overline{)369}$ = 41 $\quad 8\overline{)512}$ = 64

9 × 30,000 = 270,000 $\quad$ 25 × 20 = 500

3. Joey baked 129 loaves of bread this week. Derek baked 13 loaves of bread every day for 6 days. Who baked more bread, Joey or Derek?

Joey

4. Circle all the fractions that are equivalent to one-half.

(3/6) 4/5 8/10 (11/22) 4/7 (6/12) (2/4)

5. Complete these problems using the order of operations.

$36 \div 4 + (18 - 8) \times 3^2 =$ 99

$24 \div 2^2 - (15 - 12) \times 2 =$ 0

6. Label each shape with its most specific name.

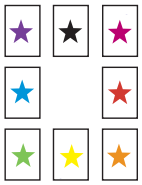
rhombus | rectangle | parallelogram

5 × 5 = 25	9 × 9 = 81	6 × 4 = 24	9 × 6 = 54	12 × 12 = 144	5 × 10 = 50	2 × 11 = 22	9 × 3 = 27	12 × 11 = 132	9 × 4 = 36	7 × 9 = 63	12 × 9 = 108	8 × 3 = 24	9 × 5 = 45	9 × 8 = 72

TURNING THROUGH TIME

Today, you get to travel back in time to learn more about Lewis and Clark's journey westward. Along the way they met many people from different Native American tribes. One Native American woman named Sacagawea traveled with them part of the way, helping Lewis and Clark navigate the journey. They also had one other companion who made the entire trip with them. Complete the activity to find out who it was.

Cut out the cards on the next page. Lay them star side up on the floor according to the image shown to the right.



To start the game, stand in the center and face the card with the black star. Now turn 90 degrees clockwise and pick up the card in front of you. Without turning, take a step forward and STAND IN THE PLACE of the card you picked up, and then read the card.

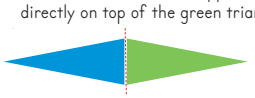
Read the information to learn more about each state the Lewis and Clark expedition traveled through. Then follow the instructions to find which card you will travel to next. DO NOT TURN unless instructed to do so. Each time you pick up a card, take a step forward and stand where the card was on the floor. Continue until you have collected all the cards. Use the letters underlined in each state's name to find out who traveled with Lewis and Clark.

Lewis and Clark had a companion who became famous for being a member of the first American overland expedition from the Mississippi River to the Pacific Coast and back. He made it the entire journey. This companion had black hair and is called a Newfoundland. His name was

S	e	a	m	a	n		t	h	e		D	o	g
1	2	3	4	5	6		7	8	9		10	11	12

Review

1. Which geometric transformation (translation, rotation, or reflection) needs to happen to move the blue triangle directly on top of the green triangle?



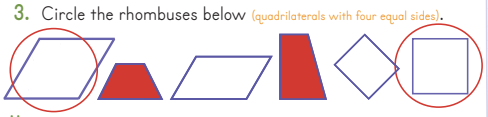
reflection (Rotation would also be correct.)

2. Complete each problem. Use scratch paper if necessary.

$6\overline{)222} = 37$ $3\overline{)192} = 64$ $8\overline{)496} = 62$ $7\overline{)196} = 28$

$8 \times 30{,}000 = 240{,}000$ $12 \times 500 = 6{,}000$

3. Circle the rhombuses below (quadrilaterals with four equal sides).



4. Color in the trapezoids above (quadrilaterals with 1 pair of parallel sides).

5. Write each digit in the correct place value position on the lines at the bottom.

a) 8 in the tens place
b) 7 in the millions place
c) 4 in the thousands place
d) 3 in the hundred thousands place
e) 0 in the hundreds place
f) 2 in the ten millions place
g) 1 in the ones place
h) 1 in the ten thousands place

2 7 , 3 1 4 , 0 8 1

September 24, 1804
Lewis and Clark are confronted by a Teton Sioux tribe in South Dakota. After a tense argument, the chief allows Lewis and Clark to continue upriver.

Turn clockwise 270 degrees and walk toward the card you are facing. Pick it up and read the next clue.

Name of State:

South Dakota
7

August 20, 1804
While passing through Iowa, Lewis and Clark lose a crew member to an illness. He was the only man who passed away during the two-year journey.

Turn counterclockwise 90 degrees and walk toward the card you are facing. Pick it up and read the next clue.

Name of State:

Iowa
3

August 3, 1804
Lewis and Clark hold a council with the chiefs of local tribes along the banks of the Big Nemaha River in Nebraska.

Turn clockwise 270 degrees and walk toward the card you are facing. Pick it up and read the next clue.

Name of State:

Nebraska
6 2

May 14, 1804
Lewis and Clark begin their journey in the state of Missouri. They board a keelboat and begin sailing west up the Missouri River.

Turn counterclockwise 180 degrees and walk toward the card you are facing. Pick it up and read the next clue.

Name of State:

Missouri
1

November 15, 1805
Lewis and Clark reach the Pacific Ocean and build Fort Clatsop along the Columbia River in the state of Oregon. They live there during the winter before making their way back.

Use the underlined letters in each state's name to solve the riddle about Lewis and Clark's companion.

Name of State:

Oregon
9 12

August 17, 1805
Along the border of Idaho, Lewis and Clark meet with the Shoshone, Sacagawea's native tribe. She is reunited with her brother.

Turn clockwise 90 degrees and walk toward the card you are facing. Pick it up and read the next clue.

Name of State:

Idaho
8

June 3, 1805
Lewis and Clark must decide which way to go when they approach a fork in the Missouri River in Montana. They figure out the right path and continue on their journey.

Turn clockwise 180 degrees and walk toward the card you are facing. Pick it up and read the next clue.

Name of State:

Montana
4 5

November 11, 1804
Lewis and Clark meet Sacagawea and her husband in the state of North Dakota. The two of them join Lewis and Clark on their expedition west.

Turn counterclockwise 90 degrees and walk toward the card you are facing. Pick it up and read the next clue.

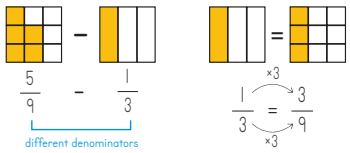
Name of State:

North Dakota
11 10

The denominators in the subtraction problem below are different. Just like addition, we cannot subtract these fractions until they have a common denominator.

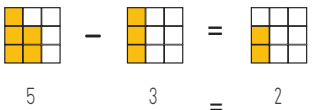
Find an equivalent fraction for the fraction with the smaller denominator. Make sure the equivalent fraction has the same denominator as the fraction with the larger denominator.

Step 1: Find a fraction equivalent to $\frac{1}{3}$ that has a denominator of 9; multiply the numerator and denominator by 3.



Now the fractions have common denominators and can be easily subtracted. Remember to subtract the numerators only and keep the denominator the same.

Step 2: Replace $\frac{1}{3}$ with $\frac{3}{9}$ and subtract the fractions.



$\frac{5}{9} - \frac{3}{9} = \frac{2}{9}$

Lesson Practice

1. Fill in the missing information to add or subtract the fractions.

$\frac{2}{5} + \frac{2}{10} = ?$ → $\frac{2}{5} \xrightarrow{\times 2} \frac{4}{10}$ → $\frac{4}{10} + \frac{2}{10} = \frac{6}{10}$

$\frac{1}{2} + \frac{3}{8} = ?$ → $\frac{1}{2} \xrightarrow{\times 4} \frac{4}{8}$ → $\frac{4}{8} + \frac{3}{8} = \frac{7}{8}$

$\frac{1}{3} - \frac{1}{6} = ?$ → $\frac{1}{3} \xrightarrow{\times 2} \frac{2}{6}$ → $\frac{2}{6} - \frac{1}{6} = \frac{1}{6}$

2. Add the fractions.

$\frac{1}{2} + \frac{2}{6} = \frac{5}{6}$ $\quad \frac{3}{12} + \frac{1}{4} = \frac{6}{12}$ $\quad \frac{3}{10} + \frac{2}{5} = \frac{7}{10}$

$\frac{1}{3} + \frac{4}{9} = \frac{7}{9}$ $\quad \frac{9}{16} + \frac{1}{8} = \frac{11}{16}$ $\quad \frac{2}{8} + \frac{1}{4} = \frac{6}{8}$

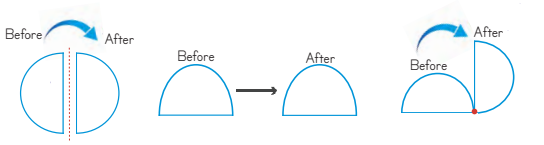
3. Subtract the fractions.

$\frac{4}{6} - \frac{1}{2} = \frac{1}{6}$ $\quad \frac{12}{20} - \frac{5}{20} = \frac{7}{20}$ $\quad \frac{15}{18} - \frac{2}{3} = \frac{9}{18}$

$\frac{5}{10} - \frac{2}{5} = \frac{1}{10}$ $\quad \frac{15}{21} - \frac{5}{21} = \frac{10}{21}$ $\quad \frac{8}{9} - \frac{2}{3} = \frac{2}{9}$

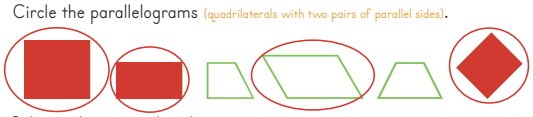
Review

1. Label each geometric transformation below.



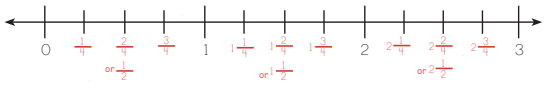
reflection translation rotation

2. Circle the parallelograms (quadrilaterals with two pairs of parallel sides).



3. Color in the rectangles above (quadrilaterals with 4 right angles).

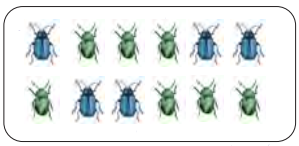
4. Label each tick mark on the number line with the missing fractions and mixed numbers.



5. Circle the prime numbers below; draw a box around the composite numbers. Hint: One of the numbers will not have a circle or a box.

24 (5) 10 21 80 (7) (19) 1 36

6. Write a fraction next to each bug that tells the part of the set that bug represents.



$\frac{5}{12}$

$\frac{7}{12}$

7. Complete each problem. Use scratch paper if necessary.

$4\overline{)224} = 56$ $\quad 9\overline{)333} = 37$ $\quad 5\overline{)265} = 53$ $\quad 3\overline{)282} = 94$

$5 \times 7{,}000 = 35{,}000$ $\quad 12 \times 40 = 480$

$3 \times 40{,}000 = 120{,}000$ $\quad 8 \times 900 = 7{,}200$

8. Add or subtract the fractions.

$\frac{7}{10} + \frac{2}{10} = \frac{9}{10}$ $\quad \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$ $\quad \frac{3}{4} + \frac{2}{4} = \frac{5}{4}$

9. One of the answers in #8 is an improper fraction. Convert it to a mixed number.

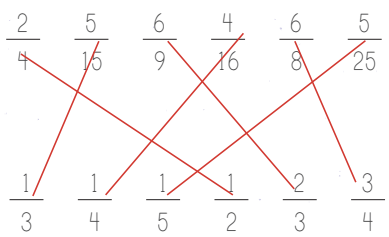
$\frac{5}{4}$ $\quad 1\frac{1}{4}$

3 × 5 = 15	4 × 8 = 32	5 × 12 = 60	4 × 3 = 12	4 × 12 = 48	8 × 6 = 48	5 × 4 = 20	3 × 12 = 36	3 × 6 = 18	7 × 5 = 35	4 × 6 = 24	3 × 7 = 21	4 × 7 = 28	5 × 8 = 40	6 × 5 = 30

Lesson Practice

1. Circle the fractions in the balloons below that are already in simplest form and cannot be reduced.

2. Draw a line from the fraction on the top row to its simplest form on the bottom row.



3. Write each fraction in simplest form. Remember, you may need to divide the fraction more than once to reduce it to simplest form.

4/6	2/3	3/9	1/3	8/16	1/2
6/10	3/5	5/20	1/4	8/24	1/3
7/21	1/3	8/12	2/3	12/30	2/5

1. Eli is ice-skating. He skates south for a while and then turns 90 degrees in a clockwise direction and continues skating. Which direction is he going now?

west

2. Which geometric transformation (translation, rotation, or reflection) needs to happen to move the blue triangle directly on top of the green triangle?

translation

3. Draw a geometric transformation of this shape by reflecting it across the red line.

4. What is the most specific name of a quadrilateral that is both a rhombus (has 4 equal sides) and a rectangle (has 4 right angles)?

a square

Review

5. Complete each problem. Use scratch paper if necessary.

$6\overline{)354} = 59$ $3\overline{)258} = 86$ $9\overline{)315} = 35$ $4\overline{)248} = 62$

$7 \times 40{,}000 = 280{,}000$ $12 \times 60 = 720$

$5 \times 5{,}000 = 25{,}000$ $12 \times 70 = 840$

$8 \times 400 = 3{,}200$ $12 \times 30 = 360$

$\frac{7}{12} + \frac{1}{4} = \frac{3}{12} = \frac{10}{12}$ $\frac{11}{18} - \frac{2}{6} = \frac{6}{18} = \frac{5}{18}$

6. Circle each type of quadrilateral that applies.

~~Parallelogram~~	Parallelogram	~~Parallelogram~~
Trapezoid	~~Trapezoid~~	Trapezoid
~~Rectangle~~	Rectangle	Rectangle
~~Rhombus~~	Rhombus	Rhombus
~~Square~~	Square	Square

7. Label each triangle below as right, acute, or obtuse. Remember, a right triangle has a right angle, an obtuse triangle has an obtuse angle, and an acute triangle has three acute angles.

acute | right | obtuse

8. Estimate the answer by rounding to the nearest ten thousand. Then complete the problem to see how close your estimate is.

$$\begin{array}{r} 158{,}354 \\ +\ 22{,}351 \\ \hline 180{,}705 \end{array} \qquad \begin{array}{r} 160{,}000 \\ +\ 20{,}000 \\ \hline 180{,}000 \end{array}$$

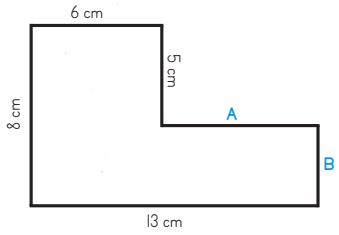
9. Pablo is 14 years old. His brother Luca is half of Pablo's age. His sister Ella is three times Luca's age. How old are Ella and Luca?

Ella 21 years old
Luca 7 years old

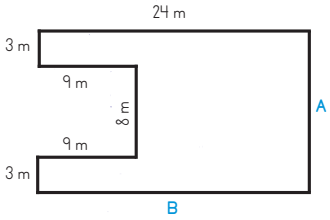
3 × 9 = 27	7 × 8 = 56	11 × 4 = 44	4 × 9 = 36	7 × 12 = 84	9 × 7 = 63	11 × 12 = 132	6 × 7 = 42	8 × 12 = 96	5 × 9 = 45	6 × 12 = 72	3 × 8 = 24	6 × 9 = 54	9 × 12 = 108	8 × 9 = 72

Lesson Practice

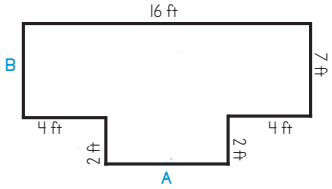
1. Find the lengths of the missing sides. Then find the perimeter of each irregular shape.



A = 7 cm
B = 3 cm
Perimeter = 42 cm

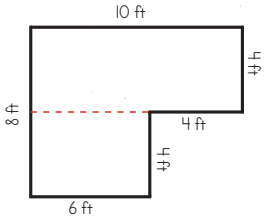


A = 14 m
B = 24 m
Perimeter = 94 m

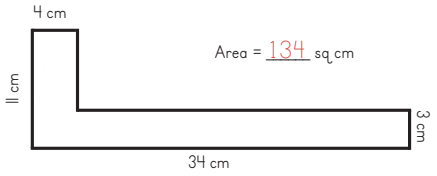


A = 8 ft
B = 7 ft
Perimeter = 50 ft

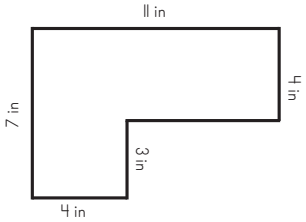
2. Find the area of each irregular shape by dividing it into smaller shapes, finding the area of each shape, and adding those areas together. The first shape has been divided for you.



Area = 64 sq ft



Area = 134 sq cm



Area = 56 sq in

Review

1. Circle the fraction that is not in simplest form and reduce it.

$\frac{3}{4}$ $\frac{1}{15}$ $\frac{2}{3}$ $\frac{2}{8}$ $\frac{1}{2}$ $\frac{3}{25}$ $\frac{1}{4}$

2. Reduce each fraction to its simplest form.
Remember, you may need to divide more than once.

$\frac{3}{9} = \frac{1}{3}$ $\frac{4}{12} = \frac{1}{3}$ $\frac{2}{8} = \frac{1}{4}$ $\frac{5}{15} = \frac{1}{3}$

3. Find a common denominator to add or subtract the fractions.

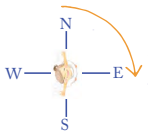
$\frac{1\cancel{4}}{\cancel{3}12} + \frac{3}{12} = \frac{7}{12}$ $\frac{12}{48} + \frac{1\cancel{6}}{\cancel{8}48} = \frac{18}{48}$ $\frac{\cancel{3}15}{\cancel{4}20} + \frac{2}{20} = \frac{17}{20}$

$\frac{9}{15} - \frac{\cancel{2}6}{\cancel{5}15} = \frac{3}{15}$ $\frac{16}{24} - \frac{\cancel{2}8}{\cancel{6}24} = \frac{8}{24}$ $\frac{5}{8} - \frac{1\cancel{4}}{\cancel{2}8} = \frac{1}{8}$

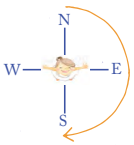
4. Write all the multiples of 6 between 24 and 66.

24, 30, 36, 42, 48, 54, 60, 66

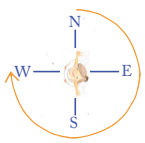
5. Write the measurement of each clockwise turn in degrees.



90°

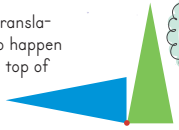


180°



270°

6. Which geometric transformation (translation, rotation, or reflection) needs to happen to move the blue triangle directly on top of the green triangle?



rotation

See the Reference Guide on page 394.

7. Complete each problem. Use scratch paper if necessary.

$2\overline{)136} = 68$ $7\overline{)238} = 34$ $4\overline{)252} = 63$ $9\overline{)513} = 57$

3 × 3 = 9	9 × 5 = 45	5 × 6 = 30	6 × 6 = 36	12 × 4 = 48	5 × 3 = 15	12 × 12 = 144	6 × 3 = 18	12 × 5 = 60	7 × 3 = 21	5 × 7 = 35	4 × 5 = 20	12 × 3 = 36	9 × 8 = 72	4 × 4 = 16

Lesson 69

LONG DIVISION: PART 5

Complete today's *Math 4 Mental Math Map Mysteries* activity.

There is no video for this lesson. Read the mini lesson.

Mini Lesson

Long division is a method that can be used to divide two numbers. To perform long division, we use a division bracket. No matter how many digits are in the dividend, you can follow the four steps for long division to find the answer. In this lesson you will work with dividends up to four digits.

1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

(Repeat)

Example 1

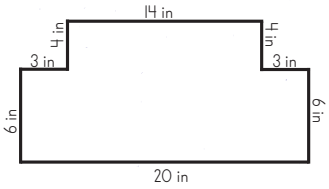
```
   2,124
3 ⟌6,372
  -6
   03
  -03
    07
   -06
     12
    -12
      0
```

Example 2

```
    426
3 ⟌1,278
  -12
    07
   -6
     18
    -18
      0
```

Review

1. Find the area and perimeter of the shape below.



Perimeter = 60 in

Area = 176 sq in

2. Reduce each fraction to its simplest form.

$\frac{6}{15} = \frac{2}{5}$ $\frac{10}{20} = \frac{1}{2}$ $\frac{7}{28} = \frac{1}{4}$ $\frac{15}{20} = \frac{3}{4}$

3. Add the fractions by creating fractions with common denominators.

$\frac{1}{3} + \frac{2}{9} = \frac{5}{9}$ $\frac{4}{6} + \frac{2}{3} = \frac{8}{6}$ $\frac{5}{16} + \frac{1}{4} = \frac{9}{16}$

4. One of the answers in #3 above is an improper fraction. Convert it to a mixed number. $\frac{8}{6} = 1\frac{2}{6}$

5. Complete each problem. Use scratch paper if necessary.

1,726 R 2 ⟌3,452	469 R 0 ⟌2,814	342 R 0 ⟌3,078
486 R 0 ⟌1,458	665 R 0 ⟌4,655	863 R 0 ⟌4,315

Lesson Practice

Tangram TANGLES

DIVISION PUZZLE

What animal sees in slow motion?

Assemble the tangram puzzle to find the answer!

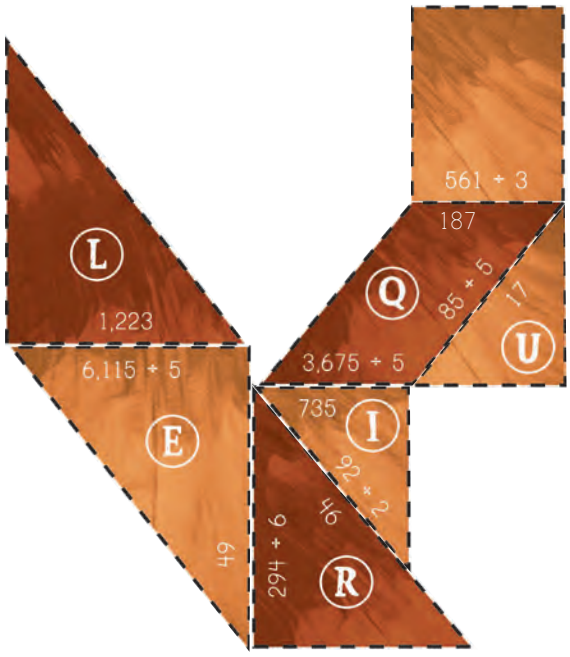
Cut out the tangram pieces. On each piece you will see a division problem, quotient, or both. Match the division problem on one piece to the correct quotient on another tangram. When you've completed the puzzle, it will be in the shape of the animal that sees in slow motion. Write the name of the animal on the line provided under the question.

Need help?

The name of this animal can be found on the tangram pieces. Look at each quotient and use the letter in the circle on that piece to fill in the blanks below. The first letter of the animal's name is already given.

S	Q	U	I	R	R	E	L
	187	17	735	46	46	49	1,223

Cut along the dotted lines. Rearrange by completing the division problems.



Lesson Practice

1. Identify each geometric solid based on the clues below:

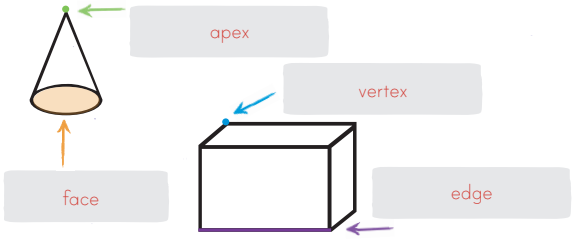
a) I have 5 vertices and 5 faces: pyramid

b) I have 6 congruent faces and 8 vertices: cube

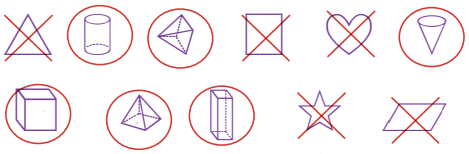
c) I have 2 circular faces and no vertices: cylinder

d) I have no edges, vertices, or faces: sphere

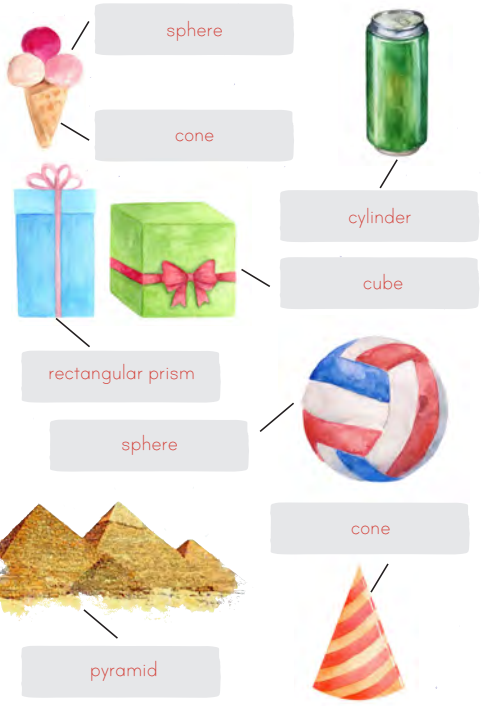
2. Label the parts of the geometric solids below.



3. Cross out the 2D shapes and circle the 3D shapes.

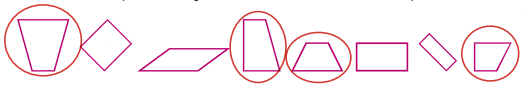


4. What geometric solids do these real objects represent?



Review

1. Circle the trapezoids (quadrilaterals with one set of parallel sides).



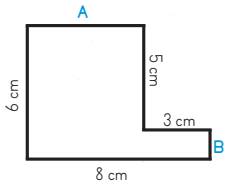
2. Complete each problem. Use scratch paper if necessary.

$4\overline{)1{,}428} = 357$ $\quad 7\overline{)3{,}584} = 512$ $\quad 3\overline{)2{,}022} = 674$ $\quad 2\overline{)1{,}168} = 584$

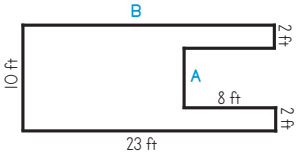
3. Write each perfect square.

$4^2 = 16$ $\quad 7^2 = 49$ $\quad 3^2 = 9$ $\quad 6^2 = 36$ $\quad 12^2 = 144$

4. Find the measurements of the missing sides. Then find the perimeter and area of each shape.



A = 5 cm
B = 1 cm
Perimeter = 28 cm
Area = 33 sq cm



A = 6 ft
B = 23 ft
Perimeter = 82 ft
Area = 182 sq ft

5. Reduce each fraction to its simplest form.

$\frac{12}{14} = \frac{6}{7}$ $\quad \frac{8}{10} = \frac{4}{5}$ $\quad \frac{16}{30} = \frac{8}{15}$ $\quad \frac{6}{9} = \frac{2}{3}$

6. Complete each problem.

4,000,000	700,000	6,000,000
− 751,069	− 52,935	− 531,089
3,248,931	647,065	5,468,911

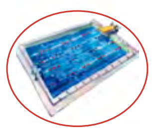
7. Write all the multiples of 7 between 63 and 112.

63, 70, 77, 84, 91, 98, 105, 112

8 × 4 = 32	7 × 9 = 63	7 × 4 = 28	9 × 3 = 27	5 × 5 = 25	6 × 8 = 48	12 × 6 = 72	8 × 8 = 64	3 × 4 = 12	8 × 5 = 40	7 × 6 = 42	12 × 7 = 84	8 × 7 = 56	7 × 7 = 49	12 × 8 = 96

Lesson Practice

1. Circle the image if you would need to calculate the volume to answer the question below it.


How much water fits in the swimming pool?


How long is this pencil?

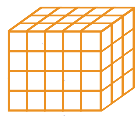

How much does this child weigh?

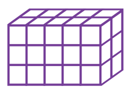

How much popcorn fits in this bag?

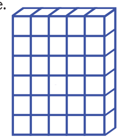

How much room is inside this box?

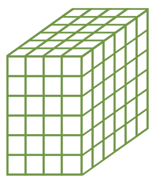

How tall is this house?

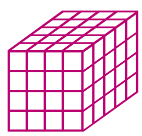
2. Find the volume of each object by figuring out the number of one-inch cubes that make up the whole shape.

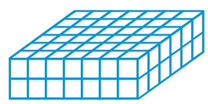

___60___ cubic in


___30___ cubic in

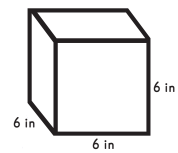

___30___ cubic in


___144___ cubic in

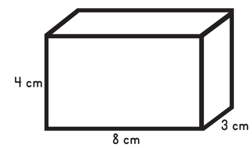

___80___ cubic in


___84___ cubic in

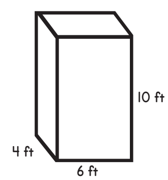
3. Find the volume of each object by multiplying the length, width, and height.



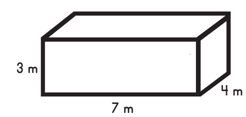
___216___ cubic in



___96___ cubic cm



___240___ cubic ft

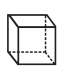


___84___ cubic m

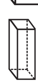
Review

1. Write the name of each geometric solid.

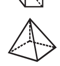
 sphere

 cube

 cone

 rectangular prism

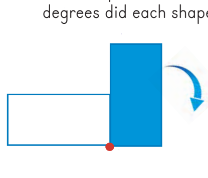
 cylinder

 pyramid

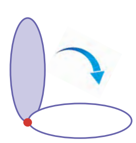
2. Michaela is facing west. She turns around until she is facing east. How many degrees did she rotate?

180°

3. Each shape was rotated clockwise around the red point. How many degrees did each shape rotate?


270°


180°


90°

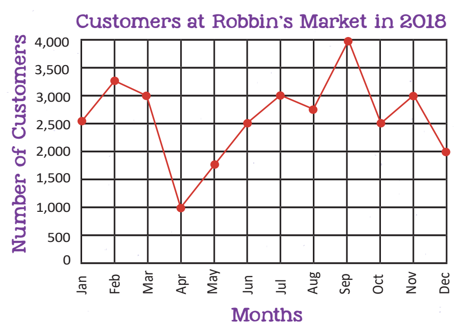
4. Complete each problem. Use scratch paper if necessary.

6) 1,068 = 178

4) 248 = 62

3) 1,404 = 468

2) 824 = 412



5. Use the line graph above to answer the questions.

a) How many customers were there in October? ___2,500___

b) How many customers were there in March and May together? ___4,750___

c) How many more customers were there in November than in December? ___1,000___

d) How many fewer customers were there in January than in July? ___500___

e) During one month there was a holiday that brought a lot of visitors to town. Looking at the graph, which month would you guess the holiday was in? ___September___

f) During one month the store closed in order to fix a broken water pipe. Looking at the graph, which month would you guess the store was closed? ___April___

Multiplication *MASTERY*

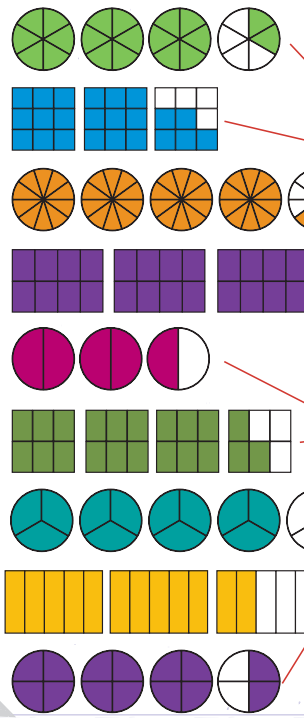
TIME:

OPTIONAL: Time yourself to see how long this page takes you to complete. Try to beat your time when you complete the mastery page again, later in this unit.

11 × 12 = 132	5 × 4 = 20	6 × 8 = 48	12 × 4 = 48	7 × 8 = 56	9 × 4 = 36	6 × 12 = 72	3 × 8 = 24	7 × 5 = 35	12 × 9 = 108	8 × 9 = 72	5 × 6 = 30	7 × 12 = 84	11 × 4 = 44
7 × 7 = 49	9 × 12 = 108	8 × 5 = 40	6 × 3 = 18	12 × 3 = 36	12 × 12 = 144	4 × 9 = 36	5 × 5 = 25	7 × 6 = 42	4 × 8 = 32	8 × 12 = 96	9 × 8 = 72	12 × 2 = 24	4 × 4 = 16
5 × 8 = 40	9 × 5 = 45	7 × 3 = 21	12 × 5 = 60	6 × 7 = 42	12 × 11 = 132	9 × 3 = 27	3 × 6 = 18	8 × 8 = 64	5 × 7 = 35	3 × 12 = 36	9 × 6 = 54	3 × 5 = 15	7 × 9 = 63
5 × 3 = 15	8 × 4 = 32	9 × 9 = 81	12 × 6 = 72	3 × 4 = 12	12 × 7 = 84	6 × 4 = 24	4 × 5 = 20	7 × 4 = 28	12 × 8 = 96	4 × 3 = 12	6 × 5 = 30	9 × 7 = 63	5 × 12 = 60
3 × 3 = 9	4 × 6 = 24	6 × 6 = 36	4 × 12 = 48	3 × 7 = 21	6 × 9 = 54	4 × 7 = 28	8 × 6 = 48	10 × 7 = 70	5 × 9 = 45	3 × 0 = 0	6 × 11 = 66	2 × 12 = 24	3 × 9 = 27

Lesson Practice

1. Draw a line to connect the shaded shapes with the mixed number, and then write its improper fraction in the gray box.



$3\frac{7}{8}$ = $\frac{31}{8}$

$4\frac{7}{10}$ = $\frac{47}{10}$

$2\frac{5}{9}$ = $\frac{23}{9}$

$3\frac{2}{6}$ = $\frac{20}{6}$

$3\frac{2}{4}$ = $\frac{14}{4}$

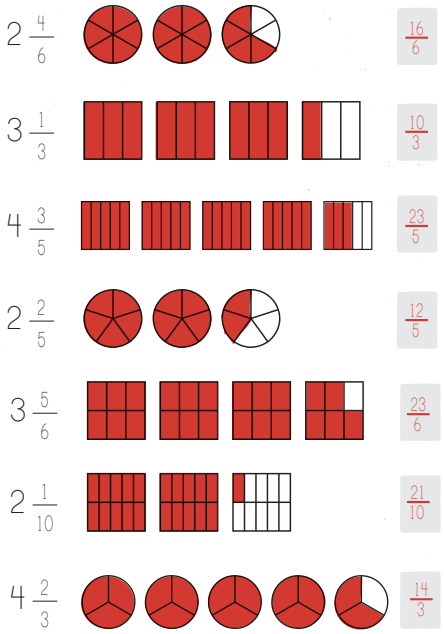
$3\frac{3}{6}$ = $\frac{21}{6}$

$2\frac{1}{2}$ = $\frac{5}{2}$

$2\frac{2}{5}$ = $\frac{12}{5}$

$4\frac{1}{3}$ = $\frac{13}{3}$

2. Shade the shapes to represent each mixed number. Then use the shaded shapes to write the improper fraction.



$2\frac{4}{6}$ = $\frac{16}{6}$

$3\frac{1}{3}$ = $\frac{10}{3}$

$4\frac{3}{5}$ = $\frac{23}{5}$

$2\frac{2}{5}$ = $\frac{12}{5}$

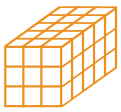
$3\frac{5}{6}$ = $\frac{23}{6}$

$2\frac{1}{10}$ = $\frac{21}{10}$

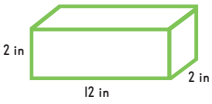
$4\frac{2}{3}$ = $\frac{14}{3}$

Review

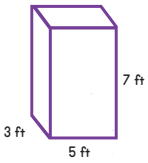
1. Find the volume of each object.



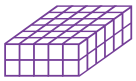
45 cubic in



48 cubic in



105 cubic ft



60 cubic in

2. Complete each conversion.

4 L = 4,000 mL

6 c = 3 pt

3 gal = 12 qt

2 gal = 8 qt = 16 pt = 32 c

21,000 mL = 21 L

18 L = 18,000 mL

8 pt = 4 qt

16 qt = 4 gal

3. Add the fractions by creating fractions with common denominators.

$\frac{\cancel{3}^{6}}{\cancel{4}^{8}} + \frac{1}{8} = \frac{7}{8}$ $\quad \frac{4}{15} + \frac{\cancel{2}^{10}}{\cancel{3}^{15}} = \frac{14}{15}$ $\quad \frac{3}{10} + \frac{\cancel{1}^{5}}{\cancel{2}^{10}} = \frac{8}{10}$ $\quad \frac{3}{9} + \frac{\cancel{1}^{3}}{\cancel{3}^{9}} = \frac{6}{9}$

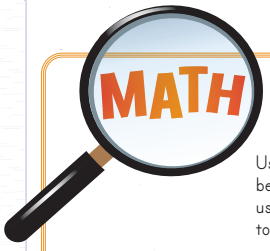
4. Reduce each fraction to its simplest form.

$\frac{20}{30} = \frac{2}{3}$ $\quad \frac{16}{24} = \frac{2}{3}$ $\quad \frac{9}{18} = \frac{1}{2}$ $\quad \frac{14}{35} = \frac{2}{5}$ $\quad \frac{15}{20} = \frac{3}{4}$

5. Complete each problem. Use scratch paper if necessary.

$7\overline{)2{,}765} = 395$ $\quad 3\overline{)381} = 127$ $\quad 8\overline{)1{,}848} = 231$ $\quad 4\overline{)928} = 232$

Lesson Practice



MATH MYSTERIES

Use the clues and the number bank below to fill in the correct answers. Then use the numbers above the colored lines to answer the question at the bottom.

I have a 3 in the tenths place. 6 1 . 3 7

I have a 1 in the thousandths place. 5 8 4 1

I have a 3 in the hundredths place. 8 . 3 3 4

I have an 8 in the tenths place. 7 1 . 8 3

I have a 1 in the hundredths place. 8 2 . 4 1

I have an 8 in the thousandths place. 1 . 3 0 8

1.308 61.37 5.841 82.41 71.83 8.334

How many times on average does a hummingbird beat its wings in one minute?

3 , 1 7 1 . 0 4

1. Fill in the missing decimal place values.

MILLIONS			THOUSANDS			ONES			DECIMALS		
hundred millions	ten millions	millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones	tenths	hundredths	thousandths

2. Follow the instructions to write the number below.

a) Write a 7 in the hundredths place.
b) Write a 4 in the ones place.
c) Write a 3 in the thousandths place.
d) Write a 5 in the tenths place.
e) Write a 1 in the tens place.
f) Write a 2 in the hundreds place.

2 1 4 . 5 7 3

3. Circle every decimal number that has a 4 in the tenths place.

64.32 (9.47) 4.841 0.74 (673.45) (0.489) 4.6 0.244

4. Circle every decimal number that has a 7 in the hundredths place.

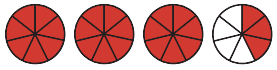
72.51 (7.87) 14.247 (0.27) 123.74 (0.574) 1.7 (0.674)

5. Circle every decimal number that has a 2 in the thousandths place.

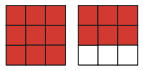
(32.522) 7.286 14.247 (0.652) 123.24 (0.542) 2.674

Review

1. Shade the shapes to represent each mixed number. Then use the shaded shapes to write the improper fraction.

$3\frac{3}{7}$  $\frac{24}{7}$

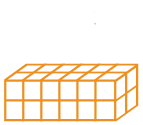
$2\frac{1}{6}$  $\frac{13}{6}$

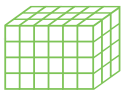
$1\frac{6}{9}$  $\frac{15}{9}$

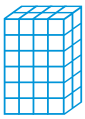
2. Write all the multiples of 12 between 60 and 132.

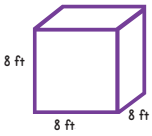
60, 72, 84, 96, 108, 120, 132

3. Find the volume of each object.

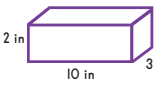

24 cubic in


72 cubic in

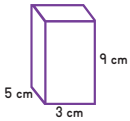

48 cubic in



512 cubic ft

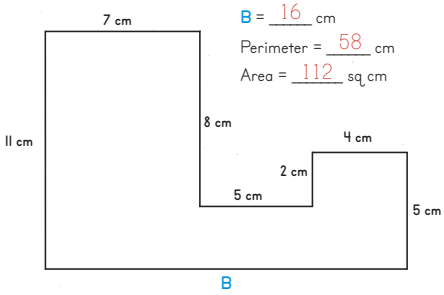


60 cubic in



135 cubic cm

4. Find the measurement of the missing side. Then find the perimeter and area. Hint: Divide this shape into three smaller rectangles.



B = 16 cm
Perimeter = 58 cm
Area = 112 sq cm

5. Round to the nearest hundred thousand.

3,418,285 → 3,400,000

12,375,201 → 12,400,000

6. Circle all the triangles that are congruent to the first triangle.

7. Complete each problem. Use scratch paper if necessary.

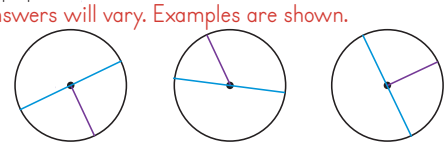
$2\overline{)1{,}764} = 882$ $9\overline{)513} = 57$ $4\overline{)296} = 74$

6	9	9	12	3	5	6	3	8	8
× 4	× 5	× 8	×12	× 5	× 4	× 5	×12	× 8	× 5
24	45	72	144	15	20	30	36	64	40
7	12	4	3	7	4				
× 6	× 6	× 8	× 7	× 5	×12				
42	72	32	21	35	48				

Lesson Practice

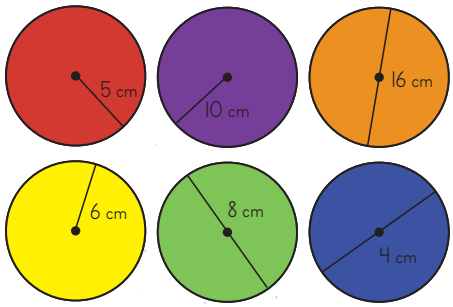
1. For each circle draw a diameter in blue and a radius in purple. Make each circle look different.

Answers will vary. Examples are shown.



2. Read the clues to color each circle.

Color the circle with a diameter of 10 cm RED.
Color the circle with a radius of 2 cm BLUE.
Color the circle with a diameter of 12 cm YELLOW.
Color the circle with a radius of 4 cm GREEN.
Color the circle with a diameter of 20 cm PURPLE.
Color the circle with a radius of 8 cm ORANGE.



3. For each picture find the measurement of the missing radius or diameter.


Radius = 4 in
Diameter = 8 in


Radius = 5 cm
Diameter = 10 cm


Radius = 15 in
Diameter = 30 in


Radius = 100 cm
Diameter = 200 cm


Radius = 3 ft
Diameter = 6 ft


Radius = 4,000 mm
Diameter = 8,000 mm

9 × 9 = 81	6 × 12 = 72	8 × 6 = 48	9 × 4 = 36
8 × 3 = 24	4 × 6 = 24	5 × 12 = 60	3 × 6 = 18
5 × 8 = 40	3 × 3 = 9	12 × 11 = 132	4 × 3 = 12
4 × 7 = 28	9 × 6 = 54	12 × 3 = 36	8 × 7 = 56

Review

1. Label each geometric solid with the correct name and number of faces, edges, and vertices.

Name: cylinder
Faces: 2
Edges: 0
Vertices: 0

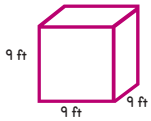
Name: pyramid
Faces: 5
Edges: 8
Vertices: 5

Name: rectangular prism
Faces: 6
Edges: 12
Vertices: 8

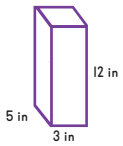
Name: cone
Faces: 1
Edges: 0
Vertices: 0

Name: sphere
Faces: 0
Edges: 0
Vertices: 0

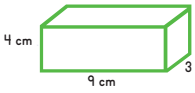
2. Find the volume of each solid using the formula Volume = Length × Width × Height. Remember to label your answer in cubic units.



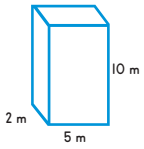
Volume = 729 cubic ft



Volume = 180 cubic in



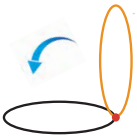
Volume = 108 cubic cm



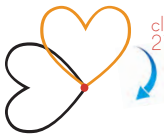
Volume = 100 cubic m

3. Each orange shape below has been rotated. Label each rotation with the direction and degree of the turn. The first has been done for you.

clockwise 180°

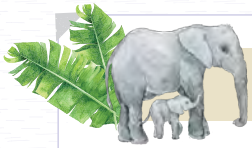


counterclockwise 90°



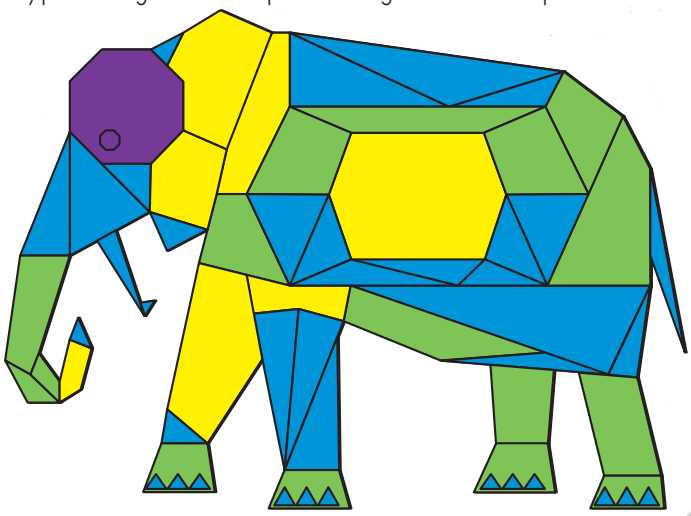
clockwise 270°

counterclockwise 180°



An elephant never forgets ... its GEOMETRY

- Color the triangles blue. Are the toes equilateral or scalene triangles? equilateral
- Color the quadrilaterals green. What do you call a quadrilateral with one pair of parallel lines? trapezoid
- Color the octagons purple. What type of angles make up the octagons in the elephant: acute, obtuse, or right? obtuse
- Color the rest of the polygons yellow. What do you call a polygon with 5 sides? pentagon
- The elephant's tail is a triangle made up of three angles. What types of angles are they? obtuse, acute, and acute (in any order)
- Find the triangle with the star. Is it a right, acute, or obtuse triangle? obtuse



ROMAN Riddles

Break the Roman numeral code! There are three Roman numerals between each of the columns. Write the value of each Roman numeral according to its color in the box below. Find the sum of the values, and then change the sum to a Roman numeral. Using the sum's Roman numeral and the letter found between each of the columns, complete the riddle below. The first one is done for you.

L	U	I	S	J	N	R	Z	E
VI	XV	XXI	XXXV	LII	LXX	L	XLII	LV
IX	VIII	XIV	XII	V	XXIV	XVIII	XXI	XXXIV
XIII	X	VI	VII	IX	II	III	XIX	XVI
6	15	21	35	52	70	50	42	55
9	8	14	12	5	24	18	21	34
+ 13	+ 10	+ 6	+ 7	+ 9	+ 2	+ 3	+ 19	+ 16
28	33	41	54	66	96	71	82	105
⇩ Roman numeral	⇩ Roman numeral	⇩ Roman numeral	⇩ Roman numeral	⇩ Roman numeral	⇩ Roman numeral	⇩ Roman numeral	⇩ Roman numeral	⇩ Roman numeral
XXVIII	XXXIII	XLI	LIV	LXVI	XCVI	LXXI	LXXII	CV

WHAT DO YOU CALL A ROMAN EMPEROR WHO HAS A COLD?

J	U	L	I	U	S		S	N	E	E	Z	E	R
LXVI	XXXIII	XXVIII	XLI	XXXIII	LIV		LIV	XCVI	CV	CV	LXXII	CV	LXXI

All done! No review.

Lesson Practice

1. Read each decimal number aloud to your parent or teacher.

32.5 7.86 14.247 0.2 123.14 0.54 4.7 0.674

2. Circle the correct word form for each decimal number.

4.05

a) four and five tenths
b) four and five hundredths
c) four and five thousandths

72.9

a) seventy-two and nine hundredths
b) seventy-two and nine tenths
c) seventy-two and nine thousandths

13.169

a) thirteen and one six nine thousandths
b) thirteen and one hundred sixty-nine thousandths
c) one three and one hundred sixty-nine thousandths

3. Complete the chart.

seven and nine-tenths	$7\frac{9}{10}$	7.9
fifty-seven and three hundredths	$57\frac{3}{100}$	57.03
three hundred seven and eleven thousandths	$307\frac{11}{1,000}$	307.011

4. Write each fraction as a decimal number.

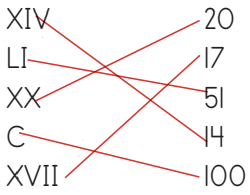
$\frac{6}{10}$ 0.6	$\frac{4}{100}$ 0.04	$\frac{22}{100}$ 0.22
$\frac{3}{1,000}$ 0.003	$\frac{9}{10}$ 0.9	$\frac{4}{10}$ 0.4
$\frac{43}{100}$ 0.43	$\frac{364}{1,000}$ 0.364	$\frac{587}{1,000}$ 0.587

5. Write each decimal number using digits.

a) four and three tenths 4.3
b) twenty-two and thirty-seven hundredths 22.37
c) six and one hundred eighteen thousandths 6.118
d) eighty-three hundredths 0.83

Review

1. Match the Roman numerals to the numbers.



2. Write the measurement of each diameter.

Diameter = 22 cm Diameter = 46 ft

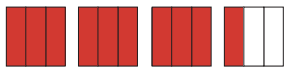
3. Follow the instructions to write the number.

a) Write a 6 in the hundredths place.
b) Write a 1 in the ones place.
c) Write an 8 in the thousandths place.
d) Write a 3 in the tenths place.
e) Write a 4 in the tens place.
f) Write a 9 in the hundreds place.

9 4 1 . 3 6 8

4. Shade the shapes to represent each mixed number. Then use the shaded shapes to write the improper fraction.

$2\frac{3}{4}$  $\frac{11}{4}$

$3\frac{1}{3}$  $\frac{10}{3}$

5. Add the fractions by creating fractions with common denominators.

$\frac{2}{4} + \frac{4}{8} = \frac{8}{8}$ $\frac{4}{12} + \frac{1}{3} = \frac{8}{12}$ $\frac{4}{10} + \frac{1}{5} = \frac{6}{10}$

6. Reduce all three answers in Problem 5 above to their simplest forms.

1 $\frac{2}{3}$ $\frac{3}{5}$

7. Complete the problem using the order of operations.
Hint: Please Excuse My Dear Aunt Sally.

$27 - 3 \times 2^2 + (15 - 5) =$ 25

8. Complete each problem. Use scratch paper if necessary.

$3\overline{)1{,}872} = 624$ $6\overline{)486} = 81$ $7\overline{)406} = 58$

6 × 6 = 36	4 × 5 = 20
5 × 7 = 35	12 × 4 = 48
7 × 8 = 56	6 × 7 = 42
12 × 9 = 108	5 × 6 = 30
5 × 3 = 15	8 × 4 = 32
9 × 3 = 27	12 × 5 = 60
3 × 9 = 27	9 × 7 = 63
7 × 12 = 84	4 × 4 = 16

Complete each problem using long division on scratch paper.

1. Daisy drove 240 miles in 3 hours. If she drove the same number of miles each hour, how many miles did she drive each hour? 80 miles

2. Marco is trying to fit 618 books equally on 3 bookshelves. How many books will he put on each shelf?
206 books

3. Chelsea flew 2,730 miles in 7 hours. If she flew the same number of miles each hour, how many miles did she fly each hour?
390 miles

4. Michelle makes the same amount of money each week at her job. After 5 weeks of dog walking, she earned $530. How much did she make each week? $106

1. Divide ÷
2. Multiply x
3. Subtract -
4. Bring Down ↓

(Repeat)

Lesson Practice

5. Darius and Jamal caught 120 trout at the fishing hole. How many fish will each boy get if they split them equally? 60 fish

6. Isabella works at a local pizza restaurant. She made 612 pizzas in the last 6 days. If she made the same number of pizzas each day, how many pizzas did she make each day?
102 pizzas

7. Kim and Juan are baking cookies for a fundraiser. They baked 428 cookies and packaged them in groups of 4. How many cookie packages do they have? 107 packages

8. Gerald volunteered for 50 hours over the last 5 days. If he volunteered the same number of hours daily, how many hours did he volunteer each day?
10 hours

9. Kojo is helping to build a school for boys and girls who live in the African village of Nzuri. There are 320 students who will be divided evenly into 8 classrooms. How many students will be learning in each classroom?
40 students

Review

1. Write each number using digits.

A) seven and two tenths 7.2

B) one hundred and twelve thousandths 100.012

C) two and seven hundredths 2.07

D) nine tenths 0.9

2. Write each number with Roman numerals.

28 - XXVIII
12 - XII
50 - L

See the Reference Guide on page 394.

3. Max's pie has a diameter of 24 cm. What is the radius of the pie? 12 cm

4. Which decimal number below has a 4 in the thousandths place? Circle it.

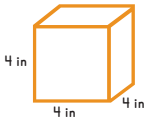
25.421 25.241 **25.214**

5. Write each perfect square.

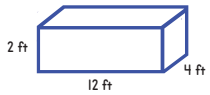
$4^2 = 16$ $6^2 = 36$ $8^2 = 64$

$7^2 = 49$ $2^2 = 4$ $5^2 = 25$

6. Find the volume of each solid using the formula Volume = Length × Width × Height. Label your answer in cubic units.

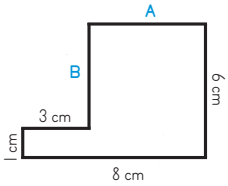


Volume = 64 cubic in



Volume = 96 cubic ft

7. Find the perimeter and area of the irregular shape.

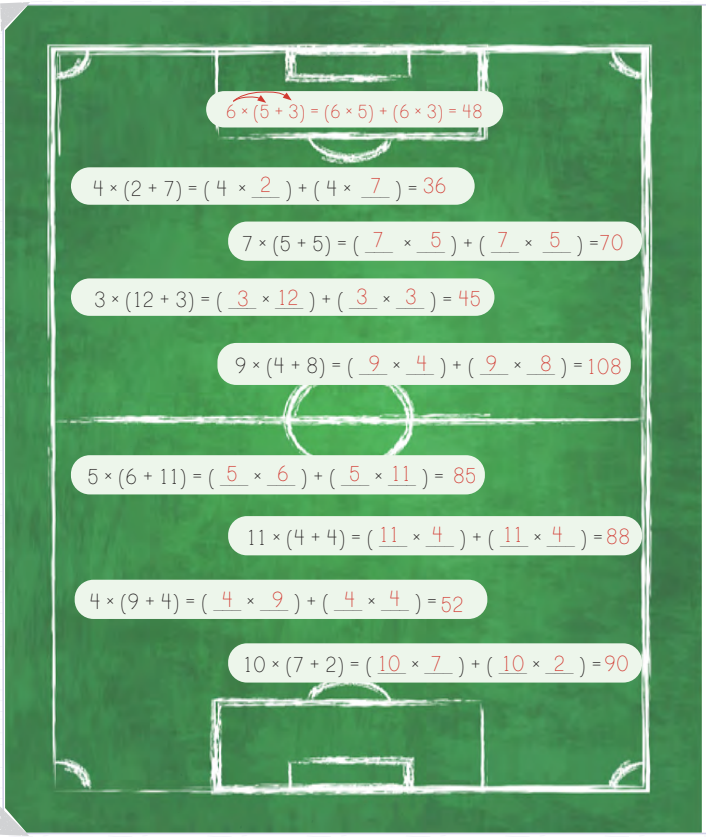


A = 5 cm
B = 5 cm
Perimeter = 28 cm
Area = 33 sq cm

8. Estimate the answer by rounding both numbers to the nearest ten thousand. Complete the original problem to see how close your estimation was.

235,791	240,000
− 126,137	− 130,000
109,654	110,000

7 × 3 = 21	4 × 9 = 36
3 × 8 = 24	8 × 12 = 96
5 × 5 = 25	7 × 9 = 63
12 × 7 = 84	6 × 3 = 18
3 × 4 = 12	5 × 5 = 25
6 × 3 = 18	5 × 9 = 45
9 × 12 = 108	7 × 4 = 28
11 × 12 = 132	8 × 9 = 72



Lesson Practice

1. Use the distributive property to complete each problem on the soccer field. Use scratch paper if you need more room.

2. Find the perimeter of each playing field below by using the formula **P = 2 × (L + W)**.

A) Ping Pong Table
Length: 9 ft
Width: 5 ft
28 ft

B) Olympic Swimming Pool
Length: 50 m
Width: 25 m
150 m

C) Volleyball Court
Length: 59 ft
Width: 30 ft
178 ft

D) Bowling Lane
Length: 60 ft
Width: 4 ft
128 ft

E) Horseshoe Pit
Length: 43 in
Width: 31 in
148 in

F) Curling Court
Length: 146 ft
Width: 14 ft
320 ft

7 × 7 = 49	4 × 6 = 24
4 × 12 = 48	7 × 9 = 63
6 × 8 = 48	3 × 5 = 15
6 × 9 = 54	4 × 8 = 32
11 × 12 = 132	5 × 4 = 20
5 × 9 = 45	9 × 12 = 108
8 × 9 = 72	6 × 5 = 30
3 × 12 = 36	10 × 4 = 40

Review

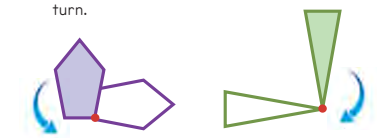
1. Write each fraction as a decimal number.

$\frac{1}{10}$ = 0.1 $\frac{24}{100}$ = 0.24

$\frac{674}{1,000}$ = 0.674 $\frac{7}{10}$ = 0.7

$\frac{6}{100}$ = 0.06 $\frac{44}{1,000}$ = 0.044

2. Each shape below has been rotated. Label each rotation with the direction and degree of the turn.



270° counterclockwise 270° clockwise

3. Find the missing factors. Then circle all the factors that are prime numbers.

96	78	75
4 × 24	(3) × 26	(5) × 15
8 × 12	(2) × 39	(3) × 25

4. Write the number for each Roman numeral.

LXII - 62 XL - 40

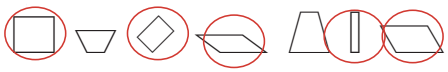
XXIX - 29 IV - 4

5. Write the place value of the underlined digit in each number using the word bank below.

287.6<u>9</u>4 hundredths	2<u>3</u>.758 ones	0.01<u>7</u> thousandths
4.<u>3</u>71 tenths	<u>9</u>34.862 hundreds	8.34<u>7</u> thousandths

hundreds, ones, tenths, hundredths, thousandths

6. Circle every shape that can be classified as a parallelogram (a quadrilateral with two pairs of parallel sides).



7. Reduce each fraction to its simplest form.

$\frac{8}{24}$ $\frac{1}{3}$ $\frac{9}{81}$ $\frac{1}{9}$ $\frac{15}{18}$ $\frac{5}{6}$ $\frac{18}{30}$ $\frac{3}{5}$

8. Write the multiples of 4 from 20 to 48.

20, 24, 28, 32, 36, 40, 44, 48

Lesson Practice

Shalleece and her family are backpacking down the Appalachian Trail. Help calculate different measurements on their trip. Use scratch paper if you need more room.

1. On the first day of their trip, Shalleece and her family were full of energy and hiked 7 miles. How many feet did they hike?

36,960 feet

2. On the second day of their trip, they had to climb a mountain. It was steep and hard, so they only made it 1,125 feet before they had to stop. How many yards did they travel on Day 2?

375 yards

3. Shalleece and her brother stretched out the rope to set up the tent. It was 4 yards long. How many inches long was the rope?

144 inches

4. In camp that night, Shalleece measured their tent. It was 72 inches tall. How many feet tall was their tent?

6 feet

5. On Day 3 they hiked for 685 yards before stopping for a snack. How many feet did they hike?

2,055 feet

6. While they ate their snack, they sat under a tree that was 9 feet tall. How tall was the tree in inches?

108 inches

7. On the last day of their trip, Shalleece and her family hiked for 4 miles. How many feet did they hike?

21,120 feet

Math Mountains

Take a hike through the mountains by completing each problem.

$20 \times 4{,}000 = 80{,}000$

$15 \times 300 = 4{,}500$

$35 \times 2{,}000 = 70{,}000$

$60 \times 40 = 2{,}400$

$5 \times (12 + 9) = 105$

$8 \times (4 + 4) = 64$

$4 \times (12 + 8) = 80$

$10 \times (6 + 7) = 130$

$7 \times (8 + 3) = 77$

$\frac{2\cancel{4}^{14}}{\cancel{4}^{28}} - \frac{7}{28} = \frac{7}{28}$

$\frac{7}{18} + \frac{\cancel{2}^{12}}{\cancel{3}^{18}} = \frac{19}{18}$

$\frac{3}{20} + \frac{\cancel{1}^{4}}{\cancel{5}^{20}} = \frac{7}{20}$

$6\overline{)1{,}620} = 270$

$7\overline{)2{,}863} = 409$

$8\overline{)856} = 107$

$7\overline{)1{,}442} = 206$

$4\overline{)1{,}216} = 304$

$8\overline{)320} = 40$

$1^2 = 1$ $\quad 9^2 = 81$ $\quad 3^2 = 9$

$10^2 = 100$ $\quad 6^2 = 36$ $\quad 12^2 = 144$

$$\begin{array}{r} 4{,}000{,}000 \\ -\ 517{,}962 \\ \hline 3{,}482{,}038 \end{array}$$

$$\begin{array}{r} 8{,}000{,}000 \\ -\ 251{,}075 \\ \hline 7{,}748{,}925 \end{array}$$

$$\begin{array}{r} \$251.35 \\ +\ \$\ 37.62 \\ \hline \$288.97 \end{array}$$

$$\begin{array}{r} \$672.48 \\ -\ \$\ 83.72 \\ \hline \$588.76 \end{array}$$

$$\begin{array}{r} \$871.05 \\ -\ \$\ 67.22 \\ \hline \$803.83 \end{array}$$

Sometimes it may be necessary to convert between units. When converting from a larger unit to a smaller unit, you multiply. When converting from a smaller unit to a larger unit, you divide.

Conversion Chart

1 km = 1,000 m	1 m = 100 cm
1 cm = 10 mm	1 m = 1,000 mm

Convert from meters to centimeters

3 m = 300 cm

1. Choose the correct conversion.
   1 m = 100 cm
2. Choose the correct operation.
   larger unit → smaller unit (×)
3. Multiply the number of meters by the number of centimeters in one meter.
   3 × 100 = 300
4. 3 m = 300 cm

Convert from meters to kilometers

8,000 m = 8 km

1. Choose the correct conversion.
   1 km = 1,000 m
2. Choose the correct operation.
   smaller unit → larger unit (÷)
3. Divide the number of meters by the number of meters in one kilometer.
   8,000 ÷ 1,000 = 8
4. 8,000 m = 8 km

Lesson Practice

1. Complete each conversion below. Use scratch paper if you need more room.

a) 7 km = 7,000 m

b) 4 m = 4,000 mm

c) 14 m = 1,400 cm

d) 300 cm = 3 m

e) 12,000 m = 12 km

f) 9,000 mm = 9 m

g) 90 mm = 9 cm

h) 600 cm = 6 m

i) 7 cm = 70 mm

2. Match each measurement on the left with its equivalent conversion on the right.

37 km	7 m
37,000 mm	8 km
700 cm	700 mm
8 m	37,000 m
8,000 m	800 cm
70 cm	37 m

3. Complete each conversion.

8,000 mm = 800 cm = 8 m

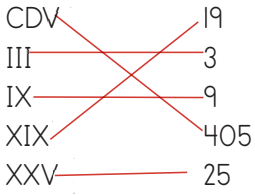
2 km = 2,000 m = 200,000 cm

Review

1. Use the distributive property to complete the problem.

$2 \times (10 + 4) = (\underline{2} \times \underline{10}) + (\underline{2} \times \underline{4}) = 28$

2. Connect each Roman numeral with the correct number.



3. Circle the prime numbers.

(13) (7) 4 15 (23)

4. Complete each conversion.

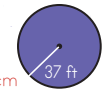
255 ft = 85 yd

60 in = 5 ft

12 inches = 1 foot	3 feet = 1 yard
36 inches = 1 yard	5,280 feet = 1 mile

5. Write the measurements of the radius and diameter of each circle.

radius = 6 cm
diameter = 12 cm

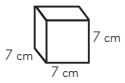


radius = 37 ft
diameter = 74 ft

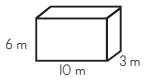
radius = 19 m
diameter = 38 m

6. Find the volume of each solid below. Write your answer in cubic units.

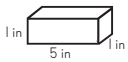
volume = 343 cubic cm



volume = 180 cubic m



volume = 5 cubic in



7. Complete each problem.

$6\overline{)1{,}848} = 308$ $\quad 4\overline{)560} = 140$ $\quad 3\overline{)1{,}734} = 578$ $\quad 7\overline{)399} = 57$

8. Reduce each fraction to its simplest form.

$\frac{12}{22} = \frac{6}{11}$ $\quad \frac{16}{32} = \frac{1}{2}$ $\quad \frac{9}{15} = \frac{3}{5}$ $\quad \frac{10}{30} = \frac{1}{3}$ $\quad \frac{12}{36} = \frac{1}{3}$

Multiplication *MASTERY*

OPTIONAL: Time yourself to see how long this page takes you. Try to beat your previous time from Lesson 71.

TIME:

7 × 7 = 49	9 × 12 = 108	8 × 5 = 40	6 × 3 = 18	12 × 3 = 36	12 × 12 = 144	4 × 9 = 36	5 × 5 = 25	7 × 6 = 42	4 × 8 = 32	8 × 12 = 96	9 × 8 = 72	12 × 2 = 24	4 × 4 = 16
11 × 12 = 132	5 × 4 = 20	6 × 8 = 48	12 × 4 = 48	7 × 8 = 56	9 × 4 = 36	6 × 12 = 72	3 × 8 = 24	7 × 5 = 35	12 × 9 = 108	8 × 9 = 72	5 × 6 = 30	7 × 12 = 84	11 × 4 = 44
3 × 3 = 9	4 × 6 = 24	6 × 6 = 36	4 × 12 = 48	3 × 7 = 21	6 × 9 = 54	4 × 7 = 28	8 × 6 = 48	10 × 7 = 70	5 × 9 = 45	3 × 0 = 0	6 × 11 = 66	2 × 12 = 24	3 × 9 = 27
5 × 3 = 15	8 × 4 = 32	9 × 9 = 81	12 × 6 = 72	3 × 4 = 12	12 × 7 = 84	6 × 4 = 24	4 × 5 = 20	7 × 4 = 28	12 × 8 = 96	4 × 3 = 12	6 × 5 = 30	9 × 7 = 63	5 × 12 = 60
5 × 8 = 40	9 × 5 = 45	7 × 3 = 21	12 × 5 = 60	6 × 7 = 42	12 × 11 = 132	9 × 3 = 27	3 × 6 = 18	8 × 8 = 64	5 × 7 = 35	3 × 12 = 36	9 × 6 = 54	3 × 5 = 15	7 × 9 = 63

• Little Lost Sheep: Divided from the Flock •

Complete each long division problem.

$4\overline{)649}$ 162 R1 $\quad 5\overline{)98}$ 19 R3 $\quad 5\overline{)389}$ 77 R4 $\quad 4\overline{)55}$ 13 R3 $\quad 6\overline{)237}$ 39 R3 $\quad 9\overline{)204}$ 22 R6 $\quad 8\overline{)554}$ 69 R2 $\quad 3\overline{)347}$ 115 R2 $\quad 7\overline{)862}$ 123 R1

Review

1. Read each decimal number aloud to your parent or teacher.

17.8 0.47 457.06 1.341
2.15 0.1 97.645
8.3 15.15 0.486 1.1

2. Write the correct number for each Roman numeral.

XXX - 30 L - 50
CXXXV - 135 CC - 200

3. Circle all the numbers that have a 1 in the hundredths place.

24.155 (8.217) (0.019)
378.321 (0.218) 89.128

4. Add the fractions. Use scratch paper for more room. Then write each answer in simplest form in the box.

$\frac{2}{4} + \frac{4}{16} = \frac{12}{16}$ $\frac{3}{4}$ $\quad \frac{2}{21} + \frac{1}{3} = \frac{9}{21}$ $\frac{3}{7}$ $\quad \frac{2}{10} + \frac{1}{2} = \frac{7}{10}$ $\frac{7}{10}$ $\quad \frac{3}{4} + \frac{3}{12} = \frac{12}{12}$ 1

5. Complete each conversion.

72 in = 6 ft

100 cm = 1,000 mm

5 yd = 180 in

52 km = 52,000 m

1 km = 1,000 m	1 m = 100 cm
1 cm = 10 mm	1 m = 1,000 mm

12 inches = 1 foot	3 feet = 1 yard
36 inches = 1 yard	5,280 feet = 1 mile

6. Shade the shapes to represent each mixed number. Then use the shaded shapes to write the improper fraction.

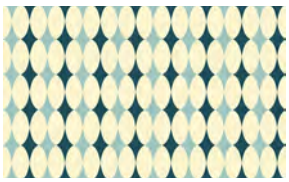
$4\frac{2}{3}$ $\frac{14}{3}$

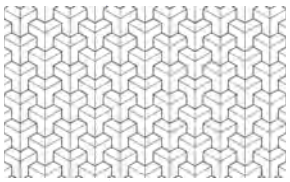
$3\frac{3}{5}$ $\frac{18}{5}$

$4\frac{2}{6}$ $\frac{26}{6}$

6 × 12 = 72	8 × 6 = 48
3 × 9 = 27	4 × 7 = 28
7 × 12 = 84	4 × 3 = 12
5 × 8 = 40	9 × 7 = 63
7 × 8 = 56	3 × 6 = 18
5 × 12 = 60	7 × 5 = 35
4 × 9 = 36	8 × 12 = 96
3 × 7 = 21	3 × 8 = 24

Irregular tessellations include all other tessellations. There are an infinite number of irregular tessellations that can be created with irregular polygons and shapes with curves.

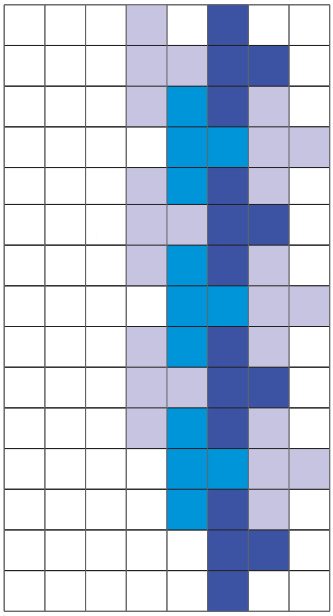


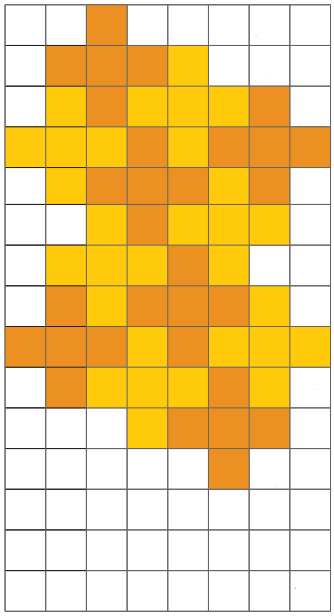


Lesson Practice

1. Color each semi-regular tessellation on page 265. Answers will vary.

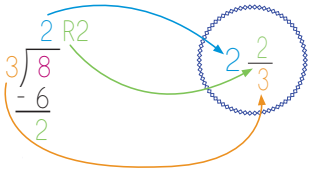
2. Using the shapes on the grids below, draw each shape so it repeats ten more times. Color each tessellation when completed. Answers will vary. Examples are shown.



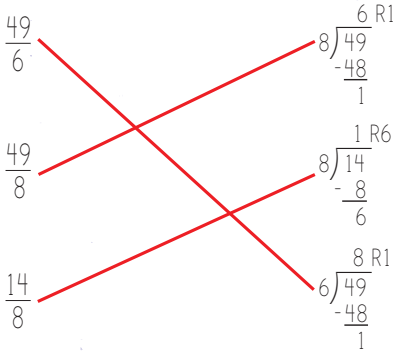


Lesson Practice

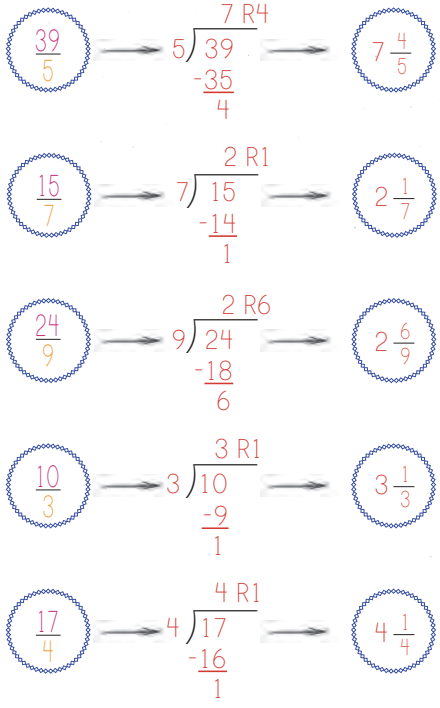
1. Draw a blue arrow to show the whole number from the division problem's quotient (answer) in the mixed number. Draw a green arrow to show that the remainder becomes the numerator of the fraction part. Draw an orange arrow to show that the divisor becomes the denominator of the fraction part.



2. Match each improper fraction to the correct division problem.



3. Use division to convert the improper fractions to mixed numbers.



9 × 9 = 81	8 × 3 = 24
5 × 3 = 15	12 × 9 = 108
8 × 4 = 32	6 × 8 = 48
5 × 5 = 25	7 × 4 = 28
7 × 9 = 63	12 × 6 = 72
12 × 8 = 96	8 × 7 = 56
6 × 3 = 18	9 × 3 = 27
12 × 5 = 60	7 × 3 = 21

Review

1. Complete each conversion.

48 ft = 16 yd

8,000 mm = 8 m

700 cm = 7 m

9 ft = 108 in

1 km = 1,000 m 1 m = 100 cm

1 cm = 10 mm 1 m = 1,000 mm

12 inches = 1 foot	3 feet = 1 yard
36 inches = 1 yard	5,280 feet = 1 mile

2. Fill in the missing decimal place values.

THOUSANDS			,	ONES			.	DECIMALS		
hundred thousands	ten thousands	thousands		hundreds	tens	ones		tenths	hundredths	thousandths

3. Complete each problem.

153 R R
4) 612

21 R5
9) 194

78 R2
7) 548

161 R1
3) 484

$\frac{\cancel{1}8}{\cancel{2}16} + \frac{3}{16} = \frac{11}{16}$

$\frac{2}{9} + \frac{\cancel{1}3}{\cancel{3}9} = \frac{5}{9}$

$\frac{7}{14} + \frac{\cancel{1}2}{\cancel{7}14} = \frac{9}{14}$

$\frac{8}{10} - \frac{\cancel{1}5}{\cancel{2}10} = \frac{3}{10}$

$\frac{\cancel{3}12}{\cancel{4}16} - \frac{5}{16} = \frac{7}{16}$

4. Write the name of each geometric solid.


cone


cube or rectangular prism


sphere

5. Write 500 with Roman numerals. D

6. Complete the logic puzzle.


+
+ 
= 58

1 × 
= 


× 
= 64


= 25


= 8


= 25

Lesson Practice

1. For each problem fill in the missing information.

22 × 14	12 × 13	43 × 22	11 × 35	14 × 12	15 × 14
88	36	86	55	28	60
+ 220	+ 120	+ 860	+ 330	+ 140	+ 150
308	156	946	385	168	210

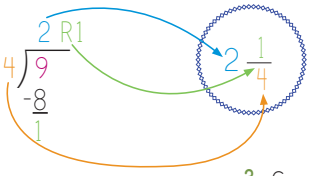
2. Erika got the following math problems wrong on her math homework. Can you find the mistake in each problem? Once you do, complete the problem correctly.

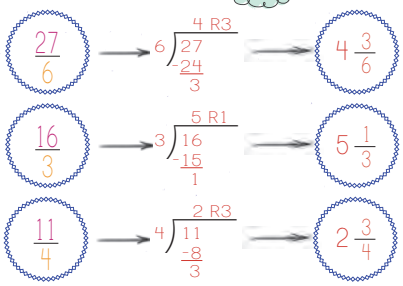
23 × 12	23 × 12	15 × 12	15 × 12	44 × 11	44 × 11
46	46	32	30	44	44
+23	+230	+150	+150	+440	+440
69	276	182	180	488	484

Review

See the Reference Guide on page 394.

1. Draw a blue arrow to show the whole number from the division problem's quotient (answer) in the mixed number. Draw a green arrow to show that the remainder becomes the numerator of the fraction part. Draw an orange arrow to show that the divisor becomes the denominator of the fraction part.





2. Complete each problem.

8) 1,656 = 207 4) 837 = 209 R1 7) 728 = 104

$\frac{1}{3} + \frac{1}{9} = \frac{4}{9}$ $\frac{7}{8} - \frac{1}{4} = \frac{3}{8}$

$\frac{2}{3} + \frac{4}{15} = \frac{14}{15}$ $\frac{11}{18} - \frac{1}{3} = \frac{5}{18}$

4 × (12 + 3) = (4 × 12) + (4 × 3) = 60

7 × (7 + 7) = (7 × 7) + (7 × 7) = 98

3. Complete each conversion.

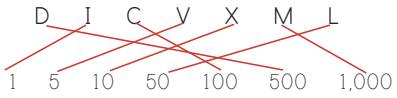
1 mi = 5,280 ft

14 km = 14,000 m

45 cm = 450 mm

9 ft = 108 in

4. Connect each Roman numeral with the correct number.



5. Alex has a purple frisbee with a diameter of 36 cm. What is the radius of her frisbee? 18 cm

6. Sam has a pepperoni pizza with a radius of 1 foot. What is the diameter of her pizza? 2 ft

7 × 6 = 42	8 × 5 = 40	3 × 5 = 15	5 × 4 = 20	6 × 5 = 30	3 × 12 = 36	5 × 9 = 45	4 × 8 = 32	3 × 7 = 21	7 × 5 = 35
11 × 12 = 132	8 × 9 = 72	7 × 7 = 49	12 × 7 = 84	3 × 4 = 12	8 × 8 = 64				

Lesson Practice

1. Write the rule next to each pattern.

25, 50, 75, 100, 125	Rule: add 25
1, 3, 9, 27, 81, 243	Rule: multiply by 3
32, 27, 22, 17, 12, 7	Rule: subtract 5
43, 54, 65, 76, 87, 98	Rule: add 11
120, 110, 100, 90, 80	Rule: subtract 10
1, 2, 4, 8, 16, 32, 64	Rule: multiply by 2

2. Fill in each pattern according to the given rule.

Rule: add 14	3, 17, 31, 45, 59, 73
Rule: subtract 8	79, 71, 63, 55, 47, 39
Rule: multiply by 10	2, 20, 200, 2,000, 20,000
Rule: add 9	214, 223, 232, 241, 250, 259
Rule: multiply by 2	10, 20, 40, 80, 160, 320

ROLL the RULE!

For each pattern, roll a dice to find the rule for the pattern. Write the number you rolled on the rule line, and then continue the pattern.

For example, if you roll a 4, then the rule for the first pattern would be add 4. Pay attention to the operation for each rule.

Rule: add ___	39, ___, ___, ___, ___, ___ Answers will vary.
Rule: subtract ___	94, ___, ___, ___, ___, ___
Rule: subtract ___	55, ___, ___, ___, ___, ___
Rule: multiply by ___	2, ___, ___, ___, ___, ___
Rule: add ___	18, ___, ___, ___, ___, ___
Rule: subtract ___	103, ___, ___, ___, ___, ___
Rule: add ___	31, ___, ___, ___, ___, ___
Rule: multiply by ___	1, ___, ___, ___, ___, ___
Rule: subtract ___	62, ___, ___, ___, ___, ___
Rule: add ___	9, ___, ___, ___, ___, ___

Review

1. Write the number twenty-five and seventy-three hundredths using digits. 25.73

2. Write the fraction $\frac{4}{100}$ as a decimal number. 0.04

3. Use division to convert these improper fractions to mixed numbers.

$\frac{31}{5}$ → $5\overline{)31}$ (6 R1, −30, 1) → $6\frac{1}{5}$

$\frac{48}{9}$ → $9\overline{)48}$ (5 R3, −45, 3) → $5\frac{3}{9}$

4. Complete each division problem.

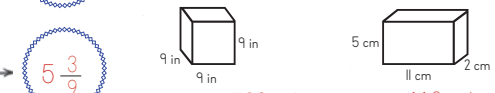
$5\overline{)2{,}578}$ = 515 R3 $\quad 7\overline{)482}$ = 68 R6 $\quad 3\overline{)274}$ = 91 R1

5. Complete each multiplication problem.

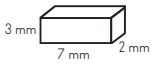
11 × 61	22 × 40	31 × 23	21 × 23	42 × 12
11	00	93	63	84
+ 660	+ 880	+ 620	+ 420	+ 420
671	880	713	483	504

6. Find the volume of each solid below. Write your answer in cubic units.

volume = 729 cubic in



volume = 110 cubic cm



volume = 42 cubic mm

7. Add or subtract the fractions. Then write each answer in simplest form in its box.

$\frac{3}{5}\frac{12}{20} + \frac{2}{20} = \frac{14}{20}$ = $\frac{7}{10}$ $\quad \frac{12}{18} - \frac{\cancel{1}6}{\cancel{3}18} = \frac{6}{18}$ = $\frac{1}{3}$ $\quad \frac{5}{12} + \frac{\cancel{2}6}{\cancel{1}12} = \frac{11}{12}$ = $\frac{11}{12}$

4 × 12	3 × 6	4 × 7	6 × 9	9 × 12	3 × 8	4 × 9	5 × 12	4 × 3	5 × 8	6 × 12	7 × 8	7 × 12	3 × 9	8 × 6
48	18	28	54	108	24	36	60	12	40	72	56	84	27	48

Sometimes when you multiply two two-digit numbers, regrouping is required. For example:

Multiply: 3 × 6 = 18
Regroup: Write 8 in the ones place and carry the 1.

$$\begin{array}{r} {\scriptstyle 1}46 \\ \times\ 23 \\ \hline 8 \end{array}$$

Multiply: 3 × 4 = 12
Add: 12 + 1 = 13

$$\begin{array}{r} 46 \\ \times\ 23 \\ \hline 138 \end{array}$$

Write: 0 in the ones place.
Cross out: the 1 from previous regrouping.

$$\begin{array}{r} \cancel{1}46 \\ \times\ 23 \\ \hline 1380 \end{array}$$

Multiply: 2 × 6 = 12
Regroup: Write the 2 and carry the 1.
Multiply: 2 × 4 = 8
Add: 8 + 1 = 9
Add: 138 + 920 = 1,058

$$\begin{array}{r} {\scriptstyle 1\ 1}46 \\ \times\ 23 \\ \hline 138 \\ +\ 920 \\ \hline 1{,}058 \end{array}$$

CREATE YOUR OWN Lesson Practice

Fill in the blanks for each question to create your own lesson practice questions. Then complete each problem to find the answer. Use scratch paper for more room.

1. _____ (girl's name) raises 27 _____ (color) _____ (type of bird, plural) at her _____ (place). If all 27 _____ (same bird, plural) have 18 feathers, how many feathers are there in total? 486 feathers

2. _____ (boy's name) makes 36 _____ (flavor) _____ (food, plural). If he puts 15 gummy bears on top of each _____ (same food, singular), how many gummy bears does he need? 540 gummy bears

3. _____ (boy's name) is taking a trip to _____ (place). His _____ (transportation vehicle) can travel 42 miles in 1 minute. How far can it travel in 28 minutes? 1,176 miles

4. _____ (girl's name) is bringing _____ (food) for her _____ (sport) team. If each of the 46 girls on her team eats 25 _____ (same food, plural), how many will she need to bring? 1,150

5. Each of 52 _____ (color) _____ (animal, plural) has 21 _____ (color) stripes. How many stripes are there in total? 1,092 stripes

6. _____ (girl's name) saw 23 _____ (adjective) _____ (noun, plural) in the street. Each _____ (same noun, singular) was carrying 29 _____ (noun, plural). How many were they carrying altogether? 667

Review

1. Continue each pattern.

79, 75, 71, 67, 63, 59, 55, 51

2, 14, 26, 38, 50, 62, 74, 86

50, 200, 350, 500, 650, 800, 950

2. Complete each conversion.

19 yd = 57 ft

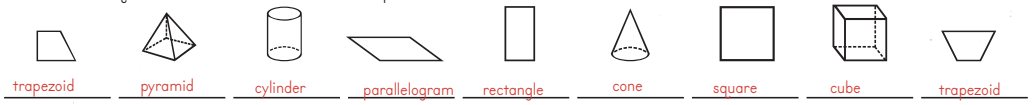
65 km = 65,000 m

8 mi = 42,240 ft

6 ft = 72 in

10 cm = 100 mm

3. Label each quadrilateral or solid with its most specific name.



trapezoid, pyramid, cylinder, parallelogram, rectangle, cone, square, cube, trapezoid

4. Complete each problem.

315 R4 for $6\overline{)1,894}$

343 R1 for $2\overline{)687}$

45 R2 for $8\overline{)362}$

5. Write each perfect square.

$5^2 = 25$ $2^2 = 4$ $8^2 = 64$ $4^2 = 16$ $9^2 = 81$

6. Write each number with Roman numerals.

100	C	19	XIX	119	CXIX
500	D	75	LXXV	575	DLXXV

7. Complete each problem.

13 × 200 = 2,600

30 × 8,000 = 240,000

6 × 7 = 42	9 × 7 = 63	8 × 12 = 96	3 × 3 = 9	7 × 3 = 21	7 × 7 = 49	12 × 9 = 108	9 × 8 = 72	9 × 4 = 36	4 × 5 = 20	6 × 3 = 18	12 × 3 = 36	12 × 6 = 72	8 × 3 = 24	6 × 4 = 24

Lesson Practice

1. Complete each problem.

49.39 + 7.88 = 57.27

223.07 + 53.20 = 276.27

428.17 - 37.99 = 390.18

73.497 - 12.510 = 60.987

2. Rewrite each problem vertically and complete it.

133.04 + 87.369 = 220.409

9.12 + 164.027 = 173.147

95.04 - 0.327 = 94.713

458.993 - 64.2 = 394.793

3. Meri has $37.95 to spend at the farmers market. She buys a bag of peaches for $11.52 and a loaf of fresh bread for $7.96. How much money does she have left? $18.47

4. José is selling homemade candles at the farmers market. In the morning he made $88.20, and in the afternoon he made $38.64. How much more money does he need to make to have $150? $23.16

5. Jocelyn is in charge of weighing fruit at her family's stand. The first batch of tomatoes weighed 25.034 lb, the second batch weighed 8.39 lb, and the third batch weighed 18.7 lb. How much did the tomatoes weigh in total?

52.124 lbs

Review

1. Write the measurements of the radius and diameter of each circle.

radius = 18 ft
diameter = 36 ft

radius = 11 mm
diameter = 22 mm

radius = 52 m
diameter = 104 m

2. Write each decimal number using digits.

a) thirty-two and one hundred twenty-five thousandths — 32.125

b) eighty-seven hundredths — 0.87

a) three hundred nine and four tenths — 309.4

3. Convert each improper fraction to a mixed number.

$\frac{17}{6}$ $2\frac{5}{6}$ $\frac{31}{3}$ $10\frac{1}{3}$ $\frac{11}{4}$ $2\frac{3}{4}$ $\frac{9}{2}$ $4\frac{1}{2}$

See the Reference Guide on page 394.

4. Write the rule for each pattern, and then continue the pattern.

84, 73, 62, 51, 40, 29, 18 Rule: subtract 11

52, 55, 58, 61, 64, 67, 70 Rule: add 3

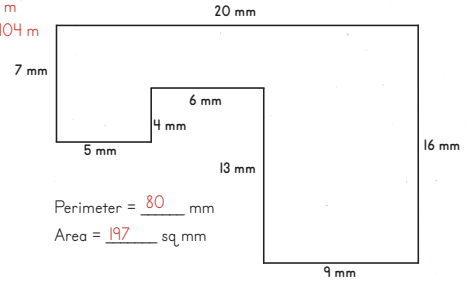
5. Complete each problem. Use scratch paper if needed.

$4\overline{)5{,}725}$ = 1,431 R1

$7\overline{)158}$ = 22 R4

$\begin{array}{r} 27 \\ \times\ 23 \\ \hline 621 \end{array}$ $\begin{array}{r} 31 \\ \times\ 61 \\ \hline 1{,}891 \end{array}$ $\begin{array}{r} 32 \\ \times\ 25 \\ \hline 800 \end{array}$

6. Find the perimeter and area. Hint: Divide this shape into three smaller rectangles.



Perimeter = 80 mm

Area = 197 sq mm

7. How many inches are in a foot? 12 inches

8. How many feet are in a yard? 3 feet

9. How many inches are in a yard? 36 inches

10. How many feet are in a mile? 5,280 feet

11. How many millimeters are in a centimeter? 10 millimeters

12. How many centimeters are in a meter? 100 centimeters

13. How many millimeters are in a meter? 1,000 millimeters

14. How many meters are in a kilometer? 1,000 meters

Multiplication *MASTERY*

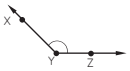
OPTIONAL: Time yourself to see how long this page takes you. Try to beat your previous time from Lesson 80.

TIME:

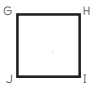
5 × 3 = 15	8 × 4 = 32	9 × 9 = 81	12 × 6 = 72	3 × 4 = 12	12 × 7 = 84	6 × 4 = 24	4 × 5 = 20	7 × 4 = 28	12 × 8 = 96	4 × 3 = 12	6 × 5 = 30	9 × 7 = 63	5 × 12 = 60
5 × 8 = 40	9 × 5 = 45	7 × 3 = 21	12 × 5 = 60	6 × 7 = 42	12 × 11 = 132	9 × 3 = 27	3 × 6 = 18	8 × 8 = 64	5 × 7 = 35	3 × 12 = 36	9 × 6 = 54	3 × 5 = 15	7 × 9 = 63
3 × 3 = 9	4 × 6 = 24	6 × 6 = 36	4 × 12 = 48	3 × 7 = 21	6 × 9 = 54	4 × 7 = 28	8 × 6 = 48	10 × 7 = 70	5 × 9 = 45	3 × 0 = 0	6 × 11 = 66	2 × 12 = 24	3 × 9 = 27
7 × 7 = 49	9 × 12 = 108	8 × 5 = 40	6 × 3 = 18	12 × 3 = 36	12 × 12 = 144	4 × 9 = 36	5 × 5 = 25	7 × 6 = 42	4 × 8 = 32	8 × 12 = 96	9 × 8 = 72	12 × 2 = 24	4 × 4 = 16
11 × 12 = 132	5 × 4 = 20	6 × 8 = 48	12 × 4 = 48	7 × 8 = 56	9 × 4 = 36	6 × 12 = 72	3 × 8 = 24	7 × 5 = 35	12 × 9 = 108	8 × 9 = 72	5 × 6 = 30	7 × 12 = 84	11 × 4 = 44

Lesson Practice

1. For each geometric figure below, circle ALL correct names.



∠Y
∠YXZ
∠ZYX

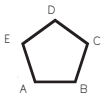


square GIHJ
square IHGJ
square GHIJ

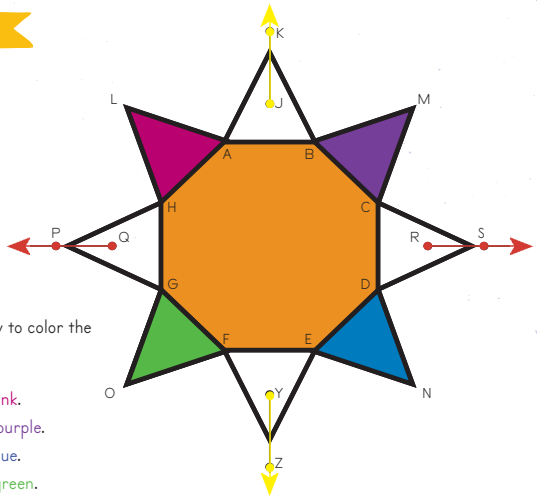
$\overline{ST}$
$\overleftrightarrow{ST}$
$\overrightarrow{TS}$
$\overrightarrow{ST}$

$\overleftarrow{AE}$
$\overleftrightarrow{EA}$
$\overrightarrow{AE}$

∠STR
∠SRT
∠S



hexagon ABCDE
octagon BCDEA
pentagon AEDCB
pentagon DEABC



2. Use the directions below to color the design to the right.

a) Color triangle HLA pink.
b) Color triangle BCM purple.
c) Color triangle DNE blue.
d) Color triangle OGF green.
e) Trace $\overrightarrow{JK}$ and $\overrightarrow{YZ}$ in yellow.
f) Trace $\overrightarrow{QP}$ and $\overrightarrow{RS}$ in red.
g) Color octagon ABCDEFGH orange.
h) Color the rest of the shapes in the design any color you want.

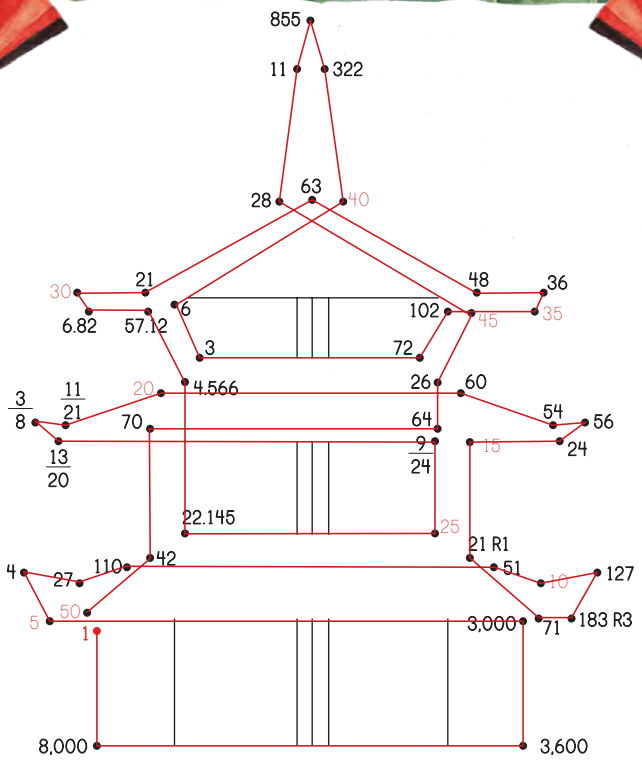
3. In the design above, triangle DEN is made up of line segments $\overline{DE}$, $\overline{EN}$, and $\overline{ND}$. Write the names of the three line segments that make up triangle ALH.

$\overline{AL}$ or $\overline{LA}$ | $\overline{LH}$ or $\overline{HL}$ | $\overline{HA}$ or $\overline{AH}$

Dot•To•Dot Review

Complete each problem below. Then use the answers to complete the dot-to-dot picture on the next page. Start at the red number 1. Draw a line to the answer to Problem 2, and then draw a line to the answer to Problem 3. The numbers in red have been done for you; simply find that number on the dot-to-dot.

1. 1	2. 400 × 20 = 8,000	3. 12 × 300 = 3,600	4. 60 × 50 = 3,000	5. 5
6. IV - 4	7. XXVII - 27	8. CX - 110	9. LI - 51	10. 10
11. $2\overline{)254}$ = 127	12. $4\overline{)735}$ = 183 R3	13. $5\overline{)355}$ = 71	14. $8\overline{)169}$ = 21 RI	15. 15
16. 6 × 4 = 24	17. 8 × 7 = 56	18. 6 × 9 = 54	19. 5 × 12 = 60	20. 20
21. $\frac{1}{3}+\frac{4}{21}=\frac{11}{21}$	22. $\frac{7}{8}-\frac{1}{2}=\frac{3}{8}$	23. $\frac{9}{20}+\frac{1}{5}=\frac{13}{20}$	24. $\frac{4}{6}-\frac{7}{24}=\frac{9}{24}$	25. 25
26. 31.745 - 9.6 = 22.145	27. 4.57 - 0.004 = 4.566	28. 61.9 - 4.78 = 57.12	29. 8.32 - 1.5 = 6.82	30. 30
31. 3 × 7 = 21	32. 9 × 7 = 63	33. 12 × 4 = 48	34. 6 × 6 = 36	35. 35
36. 34 yd = 102 ft	37. 6 ft = 72 in	38. 30 mm = 3 cm	39. 600 cm = 6 m	40. 40
41. 23 × 14 = 322	42. 45 × 19 = 855	43. 27, 23, 19, 15, 11	44. 7, 14, 21, 28	45. 45
46. Radius = 13 cm Diameter = 26 cm	47. Radius = 32 ft Diameter = 64 ft	48. Radius = 70 in Diameter = 140 in	49. Radius = 42 m Diameter = 84 m	50. 50



LESSONS 89-90

UNIT ASSESSMENT

Parent/Teacher

Read the following information aloud to the child: Unit assessments give you practice with the mathematical concepts learned in this course without having you overpractice concepts that you have mastered. These assessments also give you practice working on exercises for an extended period of time. This helps you to extend focus and attention span and to be better prepared for any type of testing you will have to do in the future. There are no videos for Lessons 89–90.

Here are some tips. First, make sure to 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. Finally, if you feel you are having trouble focusing, take a quick break to do something else, like ten jumping jacks.

For Lesson 89, complete all the exercises with PURPLE headers ONLY. Your parent or teacher will correct the work. If you make one or more mistakes in a section, your parent or teacher will check the orange "Additional Practice" checkbox for that section.

For Lesson 90, review any mini lessons or videos about topics you missed, and then complete all the orange sections **that are checked**. All the principles will be reviewed again in Unit 4. If you have only a few or no orange sections to practice, you may move on to the next unit.

Student

MULTIPLICATION (LESSONS 61, 84 & 86)

Complete the multiplication problems.

8,000 × 400 = 3,200,000 60 × 900 = 54,000

50 × 2,000 = 100,000 70 × 30 = 2,100

62	33	54	79
× 19	× 27	× 21	× 12
1,178	891	1,134	948

Additional Practice

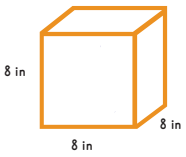
Complete the multiplication problems.

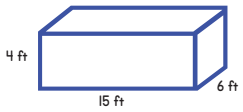
47	15	81	92
× 32	× 15	× 36	× 13
1,504	225	2,916	1,196

3,000 × 80 = 240,000 60 × 50 = 3,000

VOLUME (LESSON 71)

Find the volume of each solid. Remember to write cubic units in your answer.

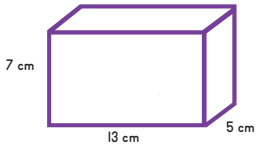


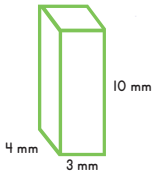


Volume = _____ Volume = _____

Additional Practice

Find the volume of each solid. Remember to write cubic units in your answer.





Volume = _____ Volume = _____

MIXED NUMBERS & IMPROPER FRACTIONS (LESSONS 72 & 83)

Convert each improper fraction to a mixed number.

$\frac{12}{5}$ ____ $\frac{23}{12}$ ____ $\frac{8}{3}$ ____ $\frac{5}{4}$ ____

Additional Practice

Match each mixed number with the equivalent improper fraction.

$8\frac{1}{6}$	$\frac{17}{5}$
$3\frac{2}{5}$	$\frac{23}{5}$
$1\frac{5}{6}$	$\frac{14}{6}$
$4\frac{3}{5}$	$\frac{49}{6}$
$2\frac{2}{6}$	$\frac{11}{6}$

CONVERSIONS (LESSONS 79 & 80)

Complete each conversion.

18 ft = 6 yd

6,000 m = 6 km

7 ft = 84 in

1 mi = 5,280 ft

5 cm = 50 mm

3 m = 300 cm

Additional Practice

How many inches are in a foot? 12 inches

How many feet are in a yard? 3 feet

How many feet are in a mile? 5,280 feet

How many millimeters are in a centimeter? 10 millimeters

How many centimeters are in a meter? 100 centimeters

How many meters are in a kilometer? 1,000 meters

8 m = 800 cm = 8,000 mm

1 mi = 1,760 yd = 5,280 ft

ADD & SUBTRACT FRACTIONS (LESSON 66)

Add or subtract the fractions. Then write each answer in simplest form in the box.

$\frac{14}{16} - \frac{1}{2} = \frac{6}{16} = \frac{3}{8}$

$\frac{2}{5} + \frac{5}{25} = \frac{15}{25} = \frac{3}{5}$

Additional Practice

Add or subtract the fractions. Reduce each answer to its simplest form.

$\frac{14}{20} - \frac{2}{4} = \frac{4}{20} = \frac{1}{5}$

$\frac{2}{8} + \frac{1}{2} = \frac{6}{8} = \frac{3}{4}$

$\frac{2}{4} + \frac{4}{12} = \frac{10}{12} = \frac{5}{6}$

$\frac{14}{18} - \frac{4}{6} = \frac{2}{18} = \frac{1}{9}$

QUADRILATERALS
(LESSON 62)

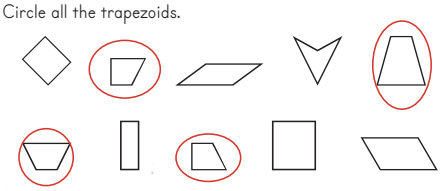
Use the word bank to label each quadrilateral below with its most specific name.

Parallelogram	Trapezoid	
Rhombus	Rectangle	Square

trapezoid | parallelogram | rectangle

rhombus | square

Circle all the trapezoids.



Additional Practice

Read the clues to determine the name of each mystery shape.

I have 4 sides.
I have one set of parallel sides.

What am I?
trapezoid

What am I?
rectangle

I have 4 sides.
I have 4 right angles.
I have two sets of parallel sides.
My sides are not all the same length.

I have 4 sides.
I have no right angles.
I have two sets of parallel sides.
My sides are all the same length.

What am I?
rhombus

What am I?
square

I have 4 sides.
I have 4 right angles.
I have two sets of parallel sides.
My sides are all the same length.

DECIMAL NUMBERS
(LESSONS 73 & 87)

Write each decimal number using digits.

a) ten and thirty-three hundredths 10.33

b) five tenths 0.5

Rewrite each problem vertically and complete it.

287.15 - 6.724	0.75 + 57.8
280.426	58.55

Additional Practice

Rewrite each problem vertically and complete it.

1.1 + 0.374	23.23 - 2.23
1.474	21

Write each decimal number using digits.

a) one and seventy-two hundredths 1.72

b) eight thousandths 0.008

LONG DIVISION
(LESSONS 77 & 81)

Complete the division problems.

$4\overline{)5{,}213}$ = 1303 R1

$7\overline{)1{,}354}$ = 193 R3

$3\overline{)257}$ = 85 R2

$6\overline{)613}$ = 102 R1

Additional Practice

Complete the division problems.

$5\overline{)1{,}221}$ = 244 R1

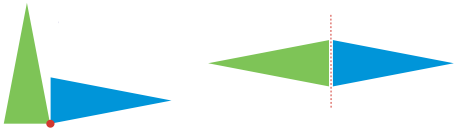
$8\overline{)1{,}642}$ = 205 R2

$9\overline{)284}$ = 31 R5

$3\overline{)348}$ = 116

MEASURING TURNS & TRANSFORMATIONS
(LESSONS 64 & 65)

Which geometric transformation is needed to move the blue triangle directly on top of the green triangle: rotation, reflection, or translation?

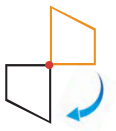


rotation

reflection (or rotation)

translation

Each orange shape below has been rotated. Label each rotation with the **direction and degree** of the turn.



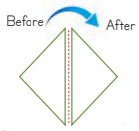
clockwise 180°

clockwise 90°

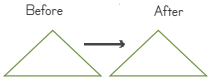
counterclockwise 270°

Additional Practice

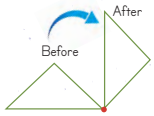
Label each geometric transformation below.



reflection (or rotation)

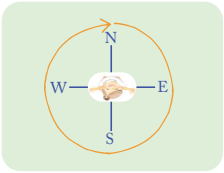


translation

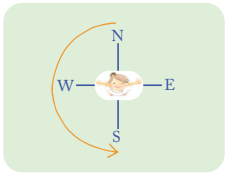


rotation

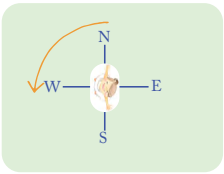
Label each rotation with the direction and degree of the turn.



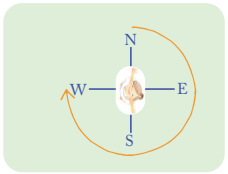
clockwise 360°



counterclockwise 180°



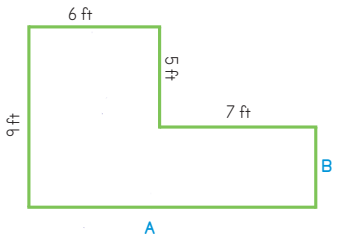
counterclockwise 90°



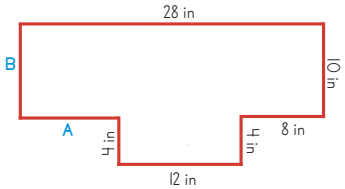
clockwise 270°

PERIMETER & AREA
(LESSON 68)

Find the lengths of the missing sides. Then find the perimeter and area of each irregular shape.

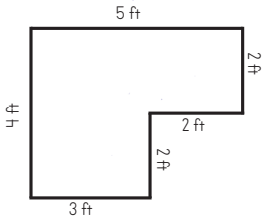


A = 13 ft
B = 4 ft
Perimeter = 44 ft
Area = 82 sq ft

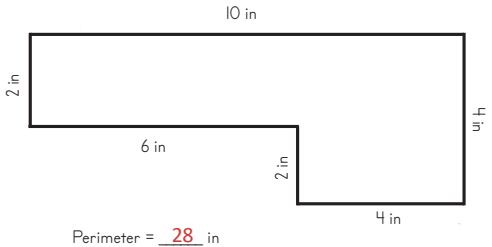


A = 8 in
B = 10 in
Perimeter = 84 in
Area = 328 sq in

Find the area and perimeter of each irregular shape.



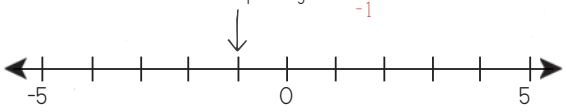
Perimeter = 18 ft
Area = 16 sq ft



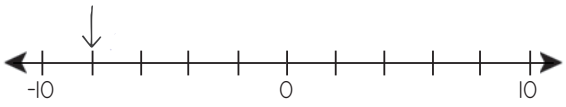
Perimeter = 28 in
Area = 28 sq in

Lesson Practice

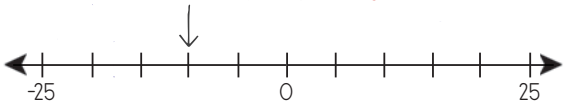
1. What number is the arrow pointing to? -1



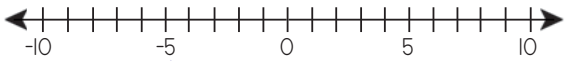
2. What number is the arrow pointing to? -8



3. What number is the arrow pointing to? -10



Use the number line below to answer the following questions.



4. What number is six less than zero? -6
5. What number is eight more than zero? 8
6. What number is ten less than five? -5

Guess WHO?

Each child created a pattern. Use the clues and write the name of each child next to the pattern he or she created. Then continue the pattern by filling in the blanks.

Darius' pattern increases by 5s.
Seth's pattern decreases by 2s.
Nala's pattern increases by 3s.
Rita's pattern increases by 2s.
Eli's pattern decreases by 5s.
Bella's pattern decreases by 3s.

Name: Eli 15, 10, 5, 0, -5, -10, -15

Name: Nala -12, -9, -6, -3, 0, 3

Name: Seth 2, 0, -2, -4, -6, -8, -10

Name: Bella 6, 3, 0, -3, -6, -9, -12

Name: Darius -20, -15, -10, -5, 0, 5

Name: Rita -6, -4, -2, 0, 2, 4

Review

1. Complete the problems, and then round the answers to the nearest million.

200,000,000	278,660,459
- 25,274,902	+ 348,901,447
174,725,098	627,561,906
175,000,000	628,000,000

2. You started your math lesson at 7:42 AM. It took you 1 hour and 7 minutes. At what time did you finish your math lesson?

8:49 AM

3. Put these numbers in order from least to greatest.

874,423 847,423 847,127 874,234

847,127 847,423 874,234 874,423

4. Circle all the fractions that are equivalent to $\frac{1}{2}$.

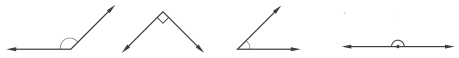
$\frac{6}{12}$ $\frac{2}{5}$ $\frac{7}{7}$ $\frac{5}{10}$ $\frac{10}{20}$ $\frac{3}{8}$ $\frac{8}{16}$ $\frac{4}{12}$ $\frac{6}{7}$

5. Use the clues to determine the mystery number.

~~15~~ ~~14~~ ~~12~~ ~~82~~ ~~38~~ ~~17~~ ~~3~~ 26 ~~8~~

I am not the number to the left of 12. I am not the number to the right of 62. I am a two-digit number. I am an even number. I am greater than 16. Added together, my digits equal 8. Rounded to the nearest ten, I equal 30. Which number am I?

6. Identify each type of angle.



Obtuse Right Acute Straight

Read with your parent or teacher

It's time to review Multiplication Set A using the Multiplication Mastery Chart on page 395 with your parent or teacher.

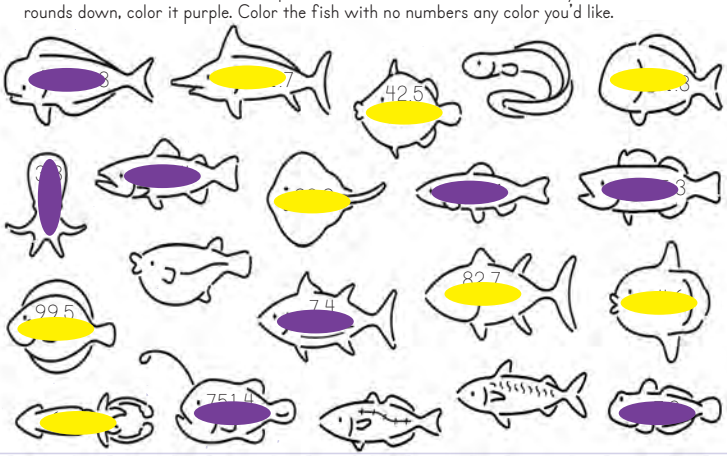
Parent/Teacher: Quiz your child on Set A facts and indicate which facts your child has mastered in the "Reviewed" column on page 395. Practice any missed facts.

6 × 7 = 42	9 × 7 = 63	8 × 12 = 96	3 × 3 = 9	7 × 3 = 21	7 × 7 = 49	12 × 9 = 108	9 × 8 = 72	9 × 4 = 36	4 × 5 = 20	6 × 3 = 18	12 × 3 = 36	12 × 6 = 72	8 × 3 = 24	6 × 4 = 24

Lesson Practice

1. For each shape, write its location on the number line. Then round that number to the nearest whole number. The first one has been done for you.

2. If the number on the fish rounds up to the nearest whole number, color it yellow. If the number rounds down, color it purple. Color the fish with no numbers any color you'd like.



3. Round each number to the nearest whole number.

5.6	6
23.4	23
18.7	19
2.5	3
78.3	78
144.6	145
50.4	50
8.8	9
386.5	387

Review

1. Complete each problem using the order of operations. Use scratch paper if you need more room.

$6^2 - 15 + (16 \div 4) = 25$ $3 \times (25 - 16) \times 2 = 54$ $4 \times (8 + 4) \div 8 = 6$

2. Complete each conversion.

4 L = 4,000 mL 12 qt = 3 gal

2,000 mL = 2 L 6 c = 3 pt

3. Circle all the prime numbers.

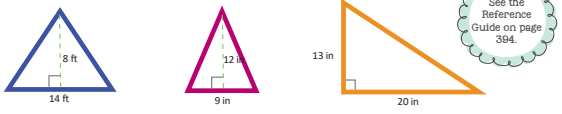
(3)	12	25	(11)	8
62	(2)	(13)	4	
48	9	80	(17)	(5)

4. Write a fraction next to each picture that tells the fraction of the set.

5. Find the missing factors. Use long division if necessary.

72	66	56
12 × 6	11 × 6	4 × 14
8 × 9	3 × 22	7 × 8

6. Find the area of each triangle.



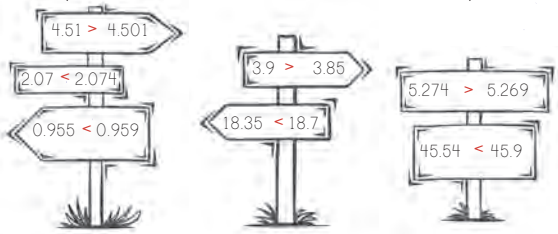
56 sq ft 54 sq in 130 sq in

See the Reference Guide on page 394.

$3\overline{)9}^{3}$ $4\overline{)16}^{4}$ $6\overline{)30}^{5}$ $12\overline{)36}^{3}$ $4\overline{)24}^{6}$ $5\overline{)45}^{9}$ $8\overline{)72}^{9}$ $12\overline{)144}^{12}$ $3\overline{)15}^{5}$ $4\overline{)20}^{5}$ $5\overline{)35}^{7}$ $12\overline{)60}^{5}$

Lesson Practice

1. Compare each set of decimal numbers and write a < or > symbol.



2. Below are the results from a swim meet. Put all the swimmers' times in order from least to greatest. Then write the name of each swimmer next to the ribbon he or she earned. Hint: The swimmer who swam in the least amount of time is the winner!

SWIMMER	TIME	SWIMMER	TIME
JENNY	6.245	RICK	6.5
CYNTHIA	6.745	PABLO	6.566
TALIA	6.27	ZOEY	6.705

Least
6.245
6.27
6.5
6.566
6.705
6.745
Greatest

1 Jenny
2 Talia
3 Rick
4 Pablo
5 Zoey
6 Cynthia

3. Start in the orange square and travel to the purple square. You can only move to a smaller number. You can only travel vertically or horizontally, not diagonally.

3.045	3.054	2.18	2.245	2.049
3.025	3.034	2.157	2.156	2.047
2.752	2.452	2.404	2.41	2.03
2.753	2.471	2.5	2.04	2.001
2.04	1.45	1.333	1.321	1.5
2.001	1.54	1.31	1.301	1.51
0.845	0.98	0.981	1.054	1.055
0.832	0.981	0.984	1.06	1.12
0.65	0.56	0.43	0.45	0.95
0.678	0.566	0.21	0.2	0.01

Review

1. Convert each improper fraction to a mixed number.

$\frac{13}{4}$ $3\frac{1}{4}$ $\frac{9}{5}$ $1\frac{4}{5}$ $\frac{22}{3}$ $7\frac{1}{3}$

2. Identify the rules and continue the patterns.

67, 60, 53, 46, 39, 32, 25 Rule: subtract 7

25, 29, 33, 37, 41, 45, 49 Rule: add 4

3. Circle every shape that can be classified as a trapezoid (a quadrilateral with one set of parallel sides).

4. Write the place value of each underlined digit.

15.3$\underline{4}$ hundredths 0.27$\underline{4}$ thousandths 3.$\underline{4}$17 tenths

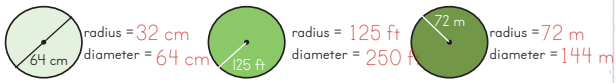
5. Complete each problem. Use scratch paper if necessary.

$3\overline{)5,166}$ = 1,722 $8\overline{)1,674}$ = 209 R2 $7\overline{)2,487}$ = 355 R2

6. Add the fractions. Then write each answer in its simplest form in the box.

$\frac{3}{4}+\frac{2}{12}=\frac{11}{12}$ $\frac{3}{10}+\frac{1}{2}=\frac{4}{5}$ $\frac{2}{8}+\frac{4}{16}=\frac{1}{2}$

7. Write the measurements of the radius and diameter of each circle.



8. Complete each conversion.

8 ft = 96 in 27 mm = 2.7 cm

9. Complete each problem.

18 × 24 = 432	36 × 17 = 612	44 × 22 = 968

10. Write each number with Roman numerals.

1 I 5 V 10 X 50 L

4 × 12 = 48	3 × 6 = 18	4 × 7 = 28	6 × 9 = 54	9 × 12 = 108	3 × 8 = 24	4 × 9 = 36	5 × 12 = 60	4 × 3 = 12	5 × 8 = 40	6 × 12 = 72	7 × 8 = 56	7 × 12 = 84	3 × 9 = 27	8 × 6 = 48

Lesson Practice

Below are two tables showing the lowest temperatures recorded each year from 2010 to 2020 in the cities of Indianapolis, Indiana, and St. Louis, Missouri. Use the tables to compare temperatures. Write the numbers in the boxes provided according to the data shown on each table. Then compare the numbers by writing a <, >, or = symbol in each circle between them.

INDIANAPOLIS GAZETTE

Lowest Temperatures for Indianapolis, Indiana

Year	°F	Year	°F
2010	1 °F	2016	-1 °F
2011	-3 °F	2017	-3 °F
2012	11 °F	2018	-12 °F
2013	2 °F	2019	-11 °F
2014	-15 °F	2020	2 °F
2015	-7 °F		

THE ST. LOUIS TIMES

Lowest Temperatures for St. Louis, Missouri

Year	°F	Year	°F
2010	0 °F	2016	3 °F
2011	0 °F	2017	2 °F
2012	13 °F	2018	-6 °F
2013	7 °F	2019	-6 °F
2014	-8 °F	2020	5 °F
2015	1 °F		

Compare the temperatures in Indianapolis, Indiana, for each year listed:

2010		2011	2012		2013	2014		2015
1°	>	-3°	11°	>	2°	-15°	<	-7°
2016		**2017**	**2018**		**2019**	**2019**		**2020**
-1°	>	-3°	-12°	<	-11°	-11°	<	2°

Compare the temperatures in St. Louis, Missouri, for each year listed:

2010		2011	2012		2013	2014		2015
0°	=	0°	13°	>	7°	-8°	<	1°
2016		**2017**	**2018**		**2019**	**2019**		**2020**
3°	>	2°	-6°	=	-6°	-6°	<	5°

Compare the temperatures in St. Louis and Indianapolis for each year listed:

2010			2015			2019		
Indianapolis		St. Louis	Indianapolis		St. Louis	Indianapolis		St. Louis
1°	>	0°	-7°	<	1°	-11°	<	-6°

Review

1. Continue each pattern.

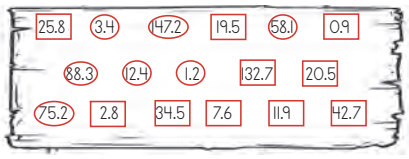
20, 15, 10, 5, 0, -5, -10, -15

-27, -20, -13, -6, 1, 8, 15, 22

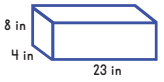
12, 9, 6, 3, 0, -3, -6, -9, -12

-2, -4, -6, -8, -10, -12, -14, -16

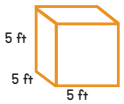
2. Circle each decimal number that rounds down to the nearest whole number. Put a box around each decimal number that rounds up to the nearest whole number.



3. Find the volume of each solid.

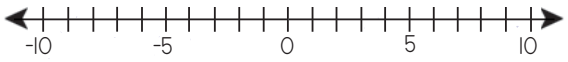


Volume = 736 cubic in



Volume = 125 cubic ft

Use the number line below to answer the following questions.



4. What number is 7 less than 0? -7
5. What number is 2 more than 0? 2
6. What number is 8 less than 5? -3
7. What number is 3 less than -2? -5
8. What number is 4 more than -5? -1
9. What number is 10 less than 3? -7

10. Arrange these decimal numbers from least to greatest.

321.017
321.170
321.071
321.107

Least
321.017
321.071
321.107
321.170
Greatest

11. Arrange these decimal numbers from greatest to least.

54.678
54.876
54.687
54.867

Greatest
54.876
54.867
54.687
54.678
Least

12. Complete each problem. Use scratch paper for more room.

$4\overline{)3{,}247} = 811\ R3$ $9\overline{)974} = 108\ R2$

45	27	72
× 12	× 56	× 11
540	1,512	792

$6\overline{)36} = 6$ $7\overline{)21} = 3$ $6\overline{)18} = 3$ $12\overline{)48} = 4$ $9\overline{)27} = 3$ $6\overline{)48} = 8$ $4\overline{)12} = 3$ $12\overline{)120} = 10$ $7\overline{)28} = 4$ $4\overline{)36} = 9$ $8\overline{)24} = 3$ $9\overline{)54} = 6$

AROUND THE WORLD

Multiplication Mountains

Complete the multiplication problems to find the height (in feet) of the tallest mountain on each continent. Write the greatest product under the picture of Mt. Everest, the second largest under Aconcagua, etc., until you have the height of each mountain.

#1. MT. EVEREST
Asia

#2. ACONCAGUA
South America

#3. DENALI
North America

#4. KILIMANJARO
Africa

#5. MT. ELBRUS
Europe

#6. MT. VINSON
Antarctica

#7. MT. KOSCIUSZKO
Australia

251	307	170	764	677	214	356
× 91	× 63	× 43	× 38	× 30	× 75	× 52
22,841	19,341	7,310	29,032	20,310	16,050	18,512

Review

1. Rewrite each problem vertically on scratch paper and complete it.

207.17 + 32.761 = 239.931

0.791 + 542.27 = 543.061

1.67 + 987.016 = 988.686

2. Write your answers from the problems above in order from least to greatest.

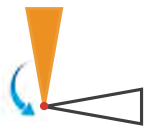
239.931, 543.061, 988.686

3. Complete each problem.

$6\overline{)1{,}847}$ = 307 R5 $\quad 5\overline{)847}$ = 169 R2 $\quad 4\overline{)387}$ = 96 R3

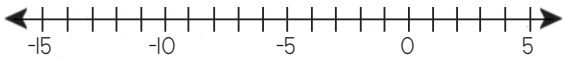
4. Each orange shape below has been rotated. Label each rotation with the direction and degree of the turn.

clockwise 90°



counterclockwise 270°

Use the number line below to answer the following questions.



5. What number is 14 less than 0? -14
6. What number is 4 more than 0? 4
7. What number is 15 less than 5? -10
8. What number is 6 less than -5? -11
9. What number is 10 more than -15? -5
10. What number is 12 less than 5? -7

11. Subtract the fractions. Then write each answer in its simplest form in the box.

$\frac{13}{16} - \frac{2}{4} = \frac{5}{16}$ $\quad \frac{16}{21} - \frac{1}{3} = \frac{3}{7}$ $\quad \frac{14}{15} - \frac{2}{3} = \frac{4}{15}$

12. Write three ways to name this line.

DE Any combination of two letters

13. Write three ways to name this angle.

∠Y ∠XYZ ∠ZYX

14. Write the name of each geometric solid.

sphere | cylinder | pyramid | cone | cube or rectangular prism

8	7	7	9	5	6	12	8	3	8	7	12	8	7	12
× 4	× 9	× 4	× 3	× 5	× 8	× 6	× 8	× 4	× 5	× 6	× 7	× 7	× 7	× 8
32	63	28	27	25	48	72	64	12	40	42	84	56	49	96

Help each bird get back to its birdhouse by completing each problem and then drawing a line from the bird to the birdhouse with the correct answer.

Review

1. Complete each problem.

$3\overline{)2{,}275} = 758$ R1 $\quad 372 \times 28 = 10{,}416$

$6\overline{)517} = 86$ R1 $\quad 693 \times 18 = 12{,}474$

$7\overline{)492} = 70$ R2 $\quad 121 \times 66 = 7{,}986$

2. Continue each pattern.

24, 18, 12, 6, 0, -6, -12

-35, -28, -21, -14, -7, 0, 7

11, 7, 3, -1, -5, -9, -13, -17

-13, -9, -5, -1, 3, 7, 11, 15

3. Round each decimal number to the nearest whole number.

24.8 → 25 $\quad$ 7.5 → 8 $\quad$ 58.6 → 59

4. Arrange these decimal numbers from least to greatest.

	Least
57.024	57.024
57.240	57.042
57.042	57.204
57.204	57.240
	Greatest

5. Arrange these decimal numbers from greatest to least.

	Greatest
115.389	115.983
115.938	115.938
115.983	115.398
115.398	115.389
	Least

6. Find the perimeter and area of this square.

perimeter = 36 cm

area = 81 sq cm

7. List all the factors of 18. Hint: Find all the pairs of numbers that equal 18 when multiplied, and then list those factors from least to greatest.

1, 2, 3, 6, 9, 18

8. List all the factors of 24.

1, 2, 3, 4, 6, 8, 12, 24

9. List all the factors of 30.

1, 2, 3, 5, 6, 10, 15, 30

$4\overline{)32} = 8 \quad 7\overline{)56} = 8 \quad 5\overline{)30} = 6 \quad 12\overline{)72} = 6 \quad 8\overline{)64} = 8 \quad 4\overline{)28} = 7 \quad 6\overline{)42} = 7 \quad 12\overline{)108} = 9 \quad 9\overline{)81} = 9 \quad 9\overline{)45} = 5 \quad 7\overline{)63} = 9 \quad 12\overline{)84} = 7$

Hot Dogs

Complete each division problem as you learn about hot dogs around the world.

AROUND THE WORLD

In Germany hot dogs are eaten with sauerkraut, mustard, potato salad, and no bun!

$10\overline{)3{,}521}$ = 352 R1

$10\overline{)360}$ = 36

In Peru hot dogs are sliced and served over fries with ketchup, mayo, and mustard.

$10\overline{)6{,}250}$ = 625

In China hot dogs are wrapped in a dumpling and baked.

$10\overline{)810}$ = 81

In France the hot dog comes in a baguette with Gruyère cheese.

$10\overline{)1{,}540}$ = 154

$10\overline{)477}$ = 47 R7

In Japan the hot dog is cut to look like a little octopus and then deep-fried!

$10\overline{)768}$ = 76 R8

In Sweden hot dogs are wrapped up with mashed potatoes, shrimp salad, and fried onions.

$10\overline{)2{,}570}$ = 257

$10\overline{)457}$ = 45 R7

In the Philippines hot dogs are served with banana ketchup, rice, and a fried egg.

$10\overline{)4{,}237}$ = 423 R7

In Vietnam hot dogs are served in a roll called banh mi with pickled vegetables on top.

Review

1. Complete each problem.

$3\frac{2}{6} + 4\frac{1}{2} = 7\frac{5}{6}$ $\quad 1\frac{1}{4} + 5\frac{4}{12} = 6\frac{7}{12}$

189	284	540	831
× 34	× 11	× 25	× 54
6,426	3,124	13,500	44,874

2. Round each decimal number to the nearest whole number.

132.4	132	5.5	6	241.9	242
36.8	37	9.1	9	58.2	58
97.2	97	12.7	13	63.6	64

3. Circle every fraction below that is equivalent to $\frac{1}{4}$.

Hint: Find the fractions that simplify to one-fourth.

$\frac{3}{12}$ $\frac{5}{20}$ $\frac{3}{8}$ $\frac{2}{8}$ $\frac{8}{32}$ $\frac{6}{24}$ $\frac{5}{16}$

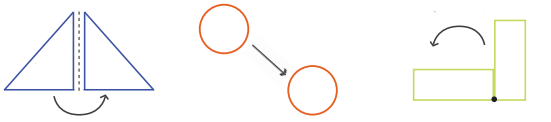
$\frac{4}{10}$ $\frac{7}{28}$ $\frac{3}{18}$ $\frac{2}{6}$ $\frac{4}{16}$ $\frac{10}{40}$

4. Follow the instructions to write the number below.

a) Write a 5 in the hundredths place.
b) Write a 1 in the ten thousands place.
c) Write a 0 in the thousands place.
d) Write a 3 in the tenths place.
e) Write a 9 in the hundred thousands place.
f) Write a 2 in the tens place.
g) Write a 7 in the millions place.
h) Write a 4 in the ones place.
i) Write an 8 in the hundreds place.

7 , 9 1 0 , 8 2 4 . 3 5

5. Label each geometric transformation.



reflection | translation | rotation

6. Lacey baked 6 dozen cookies. She gave 16 cookies to her next-door neighbors who just had a new baby. She gave 6 cookies to a widow at her church. And she gave half of the remaining cookies to her dad to take to work. How many cookies does she have left?

25 cookies

7. Phillip picked 4 dozen apples from the apple orchard. He used 13 apples to make pies and 22 apples to make applesauce. How many apples does he have left?

13 apples

Multiplication *MASTERY*

TIME:

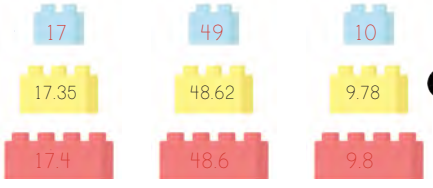
OPTIONAL: Time yourself to see how long this page takes you. Try to beat your previous time from Lesson 87.

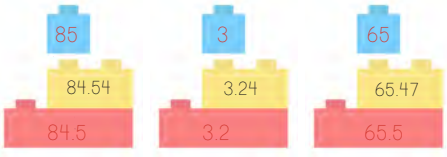
7 × 7 = 49	9 × 12 = 108	8 × 5 = 40	6 × 3 = 18	12 × 3 = 36	12 × 12 = 144	4 × 9 = 36	5 × 5 = 25	7 × 6 = 42	4 × 8 = 32	8 × 12 = 96	9 × 8 = 72	12 × 2 = 24	4 × 4 = 16
3 × 3 = 9	4 × 6 = 24	6 × 6 = 36	4 × 12 = 48	3 × 7 = 21	6 × 9 = 54	4 × 7 = 28	8 × 6 = 48	10 × 7 = 70	5 × 9 = 45	3 × 0 = 0	6 × 11 = 66	2 × 12 = 24	3 × 9 = 27
11 × 12 = 132	5 × 4 = 20	6 × 8 = 48	12 × 4 = 48	7 × 8 = 56	9 × 4 = 36	6 × 12 = 72	3 × 8 = 24	7 × 5 = 35	12 × 9 = 108	8 × 9 = 72	5 × 6 = 30	7 × 12 = 84	11 × 4 = 44
5 × 3 = 15	8 × 4 = 32	9 × 9 = 81	12 × 6 = 72	3 × 4 = 12	12 × 7 = 84	6 × 4 = 24	4 × 5 = 20	7 × 4 = 28	12 × 8 = 96	4 × 3 = 12	6 × 5 = 30	9 × 7 = 63	5 × 12 = 60
5 × 8 = 40	9 × 5 = 45	7 × 3 = 21	12 × 5 = 60	6 × 7 = 42	12 × 11 = 132	9 × 3 = 27	3 × 6 = 18	8 × 8 = 64	5 × 7 = 35	3 × 12 = 36	9 × 6 = 54	3 × 5 = 15	7 × 9 = 63

MATH MYSTERIES

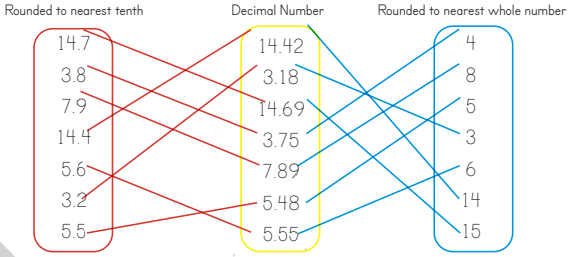
Lesson Practice

1. For each set of blocks, round the decimal number on the yellow block to the nearest whole number and write it on the blue block. Then round it to the nearest tenth and write it on the red block.





2. Draw a line from each decimal number in the CENTER column to its rounded values on BOTH sides.



Below are four decimal numbers. Round each decimal number to the nearest tenth and to the nearest whole number and write them in the spaces provided.

If you added each column of numbers, which one would have the greatest sum? Circle the column you choose, and then add each column to see if you are correct.

Decimal Number	Rounded to nearest tenth	Rounded to nearest whole number
34.58	34.6	35
7.14	7.1	7
52.39	52.4	52
+ 4.62	+ 4.6	+ 5
98.73	98.7	99

Which column had the greatest sum? Were you correct?

The third column had the greatest sum. Answers to the second question will vary.

Review

1. Complete each problem.

$7\frac{11}{12} - 3\frac{1}{2} = 4\frac{5}{12}$ $\quad 3\frac{1}{3} - 1\frac{5}{21} = 2\frac{2}{21}$

$8\overline{)4{,}957} = 619\ R5$ $\quad 10\overline{)430} = 43$ $\quad 10\overline{)182} = 18\ R2$

320 × 54 = 17,280	175 × 23 = 4,025	637 × 10 = 6,370	222 × 67 = 14,874

2. Fill in the missing numbers below.

15 + 15 = 30 $\quad$ 36 − 20 = 16

17 + 10 = 27 $\quad$ 15 − 8 = 7

12 × 5 = 60 $\quad$ 28 ÷ 2 = 14

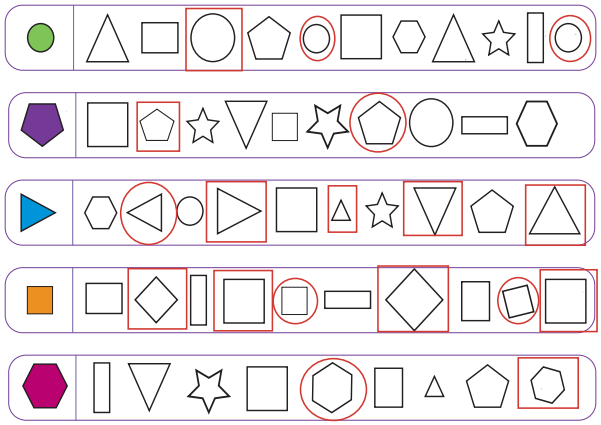
7 × 9 = 63 $\quad$ 48 ÷ 8 = 6

3. Estimate the answer to the problem below by rounding both numbers to the nearest hundred thousand. Then circle the estimated answer.

447,241 + 325,418

A) 700,000 B) 740,000 C) 780,000 D) 800,000

4. For each row, circle all shapes that are congruent (same shape and size) to the first shape and put a box around all shapes that are similar (same shape) but not congruent.



5. What do you call an 8-sided polygon?

octagon

See the Reference Guide on page 394.

Lesson Practice

1. The objects below have already been divided into equal groups. Use the pictures to answer each question.

What is $\frac{1}{3}$ of 12?

4

What is $\frac{2}{3}$ of 12?

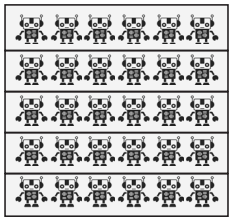
8

What is $\frac{1}{4}$ of 20?

5

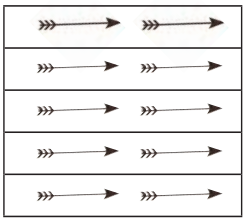
What is $\frac{3}{4}$ of 20?

15



What is $\frac{3}{5}$ of 30?

18

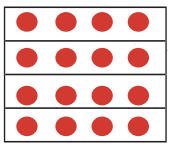


What is $\frac{2}{5}$ of 10?

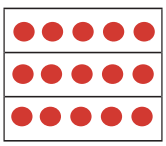
4

2. Draw shapes or symbols in the empty grids to divide each number into equal groups. Then answer the questions.

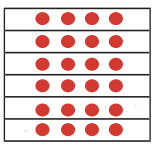
What is $\frac{3}{4}$ of 16? 12



What is $\frac{2}{3}$ of 15? 10

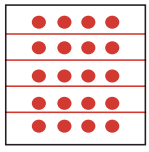


What is $\frac{4}{6}$ of 24? 16

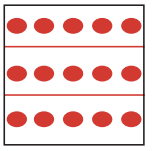


3. Draw lines on the blank boxes to divide the number into equal groups (based on the denominator). Then draw shapes or symbols and answer the questions.

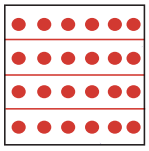
What is $\frac{1}{5}$ of 20? 4



What is $\frac{1}{3}$ of 15? 5



What is $\frac{3}{4}$ of 24? 18



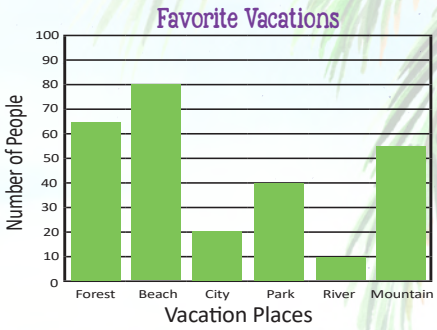
4. Answer each question; use scratch paper if you need more room.

What is $\frac{3}{4}$ of 8? 6

What is $\frac{4}{6}$ of 18? 12

Review

Caitlyn conducted a survey to determine people's favorite vacations. Use her graph to the right to answer the following questions.



1. What was the most popular vacation chosen?
   Beach
2. What was the least popular vacation chosen?
   River
3. How many people chose the forest as their favorite vacation spot?
   65
4. How many more people chose the beach than the park?
   40
5. How many people chose either the mountain or the city?
   75
6. How many fewer people chose the river than the forest?
   55
7. How many people chose the mountain as their favorite vacation spot?
   55
8. How many total people did Caitlyn interview for her survey?
   270
9. If Caitlyn interviewed you for her survey, which place would you choose?
   Answers will vary.

Read with your parent or teacher

It's time to review Multiplication Set B using the Multiplication Mastery Chart on page 395 with your parent or teacher.

Parent/Teacher: Quiz your child on Set B facts and indicate which facts your child has mastered in the "Reviewed" column on page 395. Practice any missed facts.

$5\overline{)15}=3$ $8\overline{)40}=5$ $9\overline{)63}=7$ $7\overline{)35}=5$ $5\overline{)20}=4$ $8\overline{)48}=6$ $8\overline{)32}=4$ $3\overline{)21}=7$ $7\overline{)42}=6$ $9\overline{)72}=8$ $3\overline{)27}=9$ $12\overline{)96}=8$

MEGA MONKEY MATH PATH

Lesson Practice

Simplify each mixed number, and then convert it to a decimal number. Write your answers in the white boxes. The first has been done for you. Then find your answers in order to help the monkey navigate the maze. Use a white crayon to trace your path.

$3\frac{3}{12}$ $4\frac{2}{4}$

1. $3\frac{1}{4}$ 3.25
2. $4\frac{1}{2}$ 4.5

$1\frac{12}{16}$ $2\frac{2}{8}$

3. $1\frac{3}{4}$ 1.75
4. $2\frac{1}{4}$ 2.25

$6\frac{5}{10}$ $5\frac{6}{8}$

5. $6\frac{1}{2}$ 6.5
6. $5\frac{3}{4}$ 5.75

$1\frac{5}{20}$ $1\frac{4}{8}$

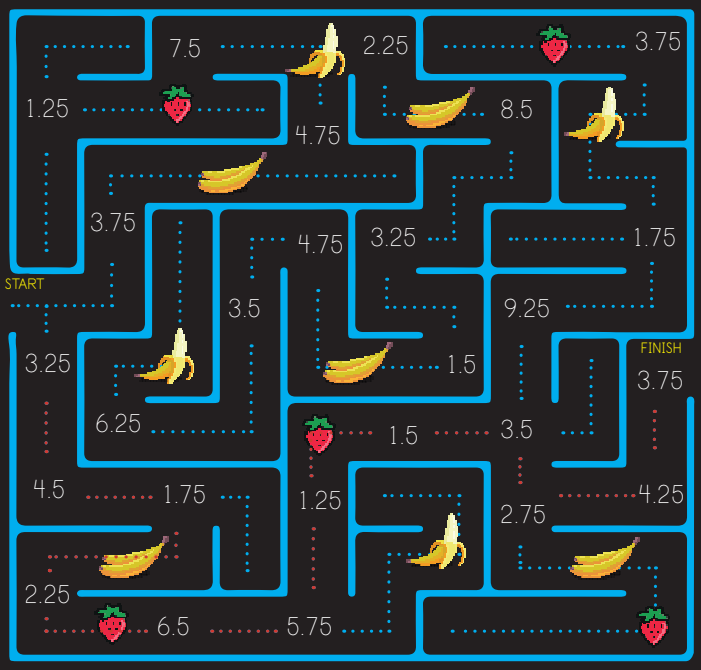
7. $1\frac{1}{4}$ 1.25
8. $1\frac{1}{2}$ 1.5

$3\frac{3}{6}$ $2\frac{15}{20}$

9. $3\frac{1}{2}$ 3.5
10. $2\frac{3}{4}$ 2.75

$4\frac{4}{16}$ $3\frac{9}{12}$

11. $4\frac{1}{4}$ 4.25
12. $3\frac{3}{4}$ 3.75



Review

1. Complete each problem.

$8\frac{12}{15} - 5\frac{2}{5} = 3\frac{6}{15}$ $\quad 4\frac{1}{2} + 3\frac{1}{4} = 7\frac{3}{4}$

690 R2 $\quad 7\overline{)4{,}832}$ $\qquad$ 44 $\quad 10\overline{)440}$ $\qquad$ 65 R7 $\quad 10\overline{)657}$

274	841	500	89
× 32	× 14	× 24	× 42
8,768	11,774	12,000	3,738

2. Round each decimal number to the nearest tenth.

47.28	47.3	2.87	2.9	241.59	241.6
8.32	8.3	7.19	7.2	156.43	156.4

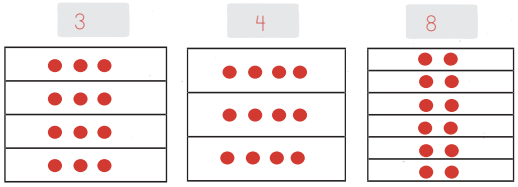
3. Continue the pattern.

9, 7, 5, 3, 1, -1, -3, -5

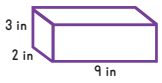
See the Reference Guide on page 394.

4. Draw shapes or symbols in the boxes to divide each number into equal groups. Then answer the questions.

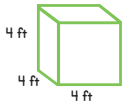
What is $\frac{1}{4}$ of 12? What is $\frac{1}{3}$ of 12? What is $\frac{4}{6}$ of 12?



5. Find the volume of each solid.



Volume = 54 cubic inches



Volume = 64 cubic feet

6. Grace is a ballet dancer. She is facing north and spins in a circle on her toes until she is facing south. How many degrees was her spin?

180°

5	9	6	9	12	5	2	9	12	9	7	12	8	9	9
× 5	× 9	× 4	× 6	× 12	× 10	× 11	× 3	× 11	× 4	× 9	× 9	× 3	× 5	× 8
25	81	24	54	144	50	22	27	132	36	63	108	24	45	72

GREAT WALL DIVISION

Divide your way along the Great Wall of China.

Review

1. Complete each problem.

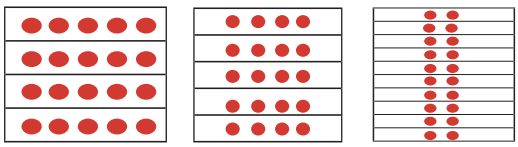
$5\frac{5}{9} - 2\frac{1}{3} = 3\frac{2}{9}$ $\quad 2\frac{1}{4} + 1\frac{4}{20} = 3\frac{9}{20}$

$5\overline{)3{,}245} = 649$ $\quad 10\overline{)680} = 68$ $\quad 10\overline{)248} = 24\ R8$

184 × 27 = 4,968	573 × 61 = 34,953	237 × 15 = 3,555	63 × 63 = 3,969

2. Use the empty grids to divide each number into equal groups. Then answer the questions.

What is $\frac{3}{4}$ of 20? 15 What is $\frac{2}{5}$ of 20? 8 What is $\frac{6}{10}$ of 20? 12



3. Round each decimal number to the nearest whole number.

56.24 → 56 $\quad$ 5.49 → 5 $\quad$ 24.59 → 25 $\quad$ 12.74 → 13

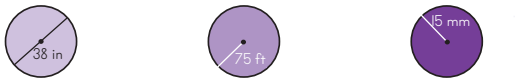
4. Simplify each fraction or mixed number, and then write it as a decimal number.

$3\frac{6}{8}$	$3\frac{3}{4}$	3.75	$\frac{15}{30}$ → $\frac{1}{2}$	0.5
$1\frac{4}{16}$	$1\frac{1}{4}$	1.25	$4\frac{12}{16}$	$4\frac{3}{4}$	4.75

5. Write each perfect square. Hint: Multiply each number by itself.

2^2 = 4	3^2 = 9	4^2 = 16	5^2 = 25
6^2 = 36	7^2 = 49	8^2 = 64	9^2 = 81

6. Write the measurements of the radius and diameter of each circle.



radius = 19 in, diameter = 38 in

radius = 75 ft, diameter = 150 ft

radius = 15 mm, diameter = 30 mm

4	5	4	8	7	4	6	7	8	6	11	2
$3\overline{)12}$	$5\overline{)25}$	$6\overline{)24}$	$5\overline{)40}$	$8\overline{)56}$	$9\overline{)36}$	$3\overline{)18}$	$7\overline{)49}$	$3\overline{)24}$	$9\overline{)54}$	$12\overline{)132}$	$12\overline{)24}$

Cereal Bowl CONVERSIONS

1. Erich eats a bowl of cereal for breakfast every day. His bowl holds 16 ounces of cereal. How many pounds of cereal are in his bowl?
1 lb

2. Erich eats 7 bowls of cereal each week. That's 7 pounds of cereal! How many ounces of cereal does Erich eat in one week?
112 oz

3. Erich's favorite cereal comes in a box that holds 48 ounces of cereal. How many pounds of cereal are in each box?
3 lb

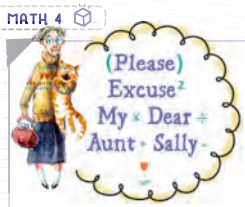
4. Erich eats an average of 28 pounds of cereal in one month. How many ounces of cereal will he eat in one month?
448 oz

5. The grocery store where Erich's mom shops sells 4,000 pounds of Erich's favorite cereal every month. How many tons do they sell each month?
2 tn

6. The grocery store receives a delivery with 9 pallets full of cereal. Each pallet has 1 ton of cereal. How many pounds of cereal were delivered to the store?
18,000 lb

7. The truck that delivers the cereal to the grocery store carries 36,000 pounds of cereal. How many tons of cereal are on the truck?
18 tn

8. The factory that makes Erich's favorite cereal makes 42 tons of cereal every day. How many pounds do they make each day?
84,000 lb



Review

1. Complete each problem using the order of operations. Use scratch paper if you need more room.

$4^2 + 15 - (60 \div 3) = 11$ $\quad 50 - (5 \times 5) + 2 = 27$ $\quad 20 \div (4 + 6) \times 8 = 16$

2. Complete each conversion.

4 gal = 32 pt	3 qt = 12 c
16 pt = 8 qt	32 c = 2 gal

3. Continue each pattern.

24, 12, 0, -12, -24, -36

-14, -10, -6, -2, 2, 6

-34, -24, -14, -4, 6, 16

13, 10, 7, 4, 1, -2

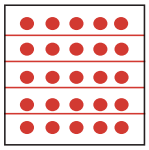
4. Simplify each fraction or mixed number, and then write it as a decimal number.

$7\frac{5}{20}$	$7\frac{1}{4}$	7.25	$\frac{11}{22}$	$\frac{1}{2}$	0.5	$3\frac{6}{8}$	$3\frac{3}{4}$	3.75	$1\frac{2}{8}$	$1\frac{1}{4}$	1.25

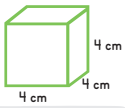
5. Use the box to divide the number 25 into 5 equal groups. Then answer the question.

What is $\frac{3}{5}$ of 25?

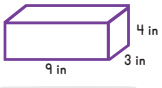
15



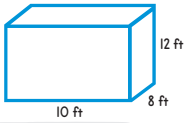
6. Find the volume of each solid.



64 cubic cm



108 cubic in



960 cubic ft

8	6	8	3	6	7	3	12	8	6	12	7	7	12	8
× 4	× 0	× 8	× 4	× 11	× 4	× 10	× 8	× 7	× 8	× 7	× 6	× 7	× 6	× 5
32	0	64	12	66	28	30	96	56	48	84	42	49	72	40

Lesson Practice

Complete each multiplication and division problem by moving the decimal point. Move the decimal to the RIGHT for multiplication and to the LEFT for division.

3.7 × 10 = 37 → 1.49 × 10 = 14.9 → 3.789 × 100 = 378.9 → 0.85 × 100 = 85 → 84.2 × 100 = 8,420 → 5.319 × 1,000 = 5,319 → 22.64 × 1,000 = 22,640 → 36.49 ÷ 10 = 3.649 → 479.9 ÷ 10 = 47.99 → 35.14 ÷ 100 = 0.3514 → 3,865 ÷ 100 = 38.65 → 284.7 ÷ 1,000 = 0.2847 → 55 ÷ 1,000 = 0.055 → 6,754 ÷ 1,000 = 6.754

Review

1. Arrange these decimal numbers from greatest to least. Then round each number to the nearest tenth.

	Greatest	Rounded
874.56	875.64	875.6
875.46	875.46	875.5
875.64	874.65	874.7
874.65	874.56	874.6
	Least	

2. Add or subtract the mixed numbers. Then write the answers in simplest form in the gray boxes.

$8\frac{3}{5} - 5\frac{1}{10} = 3\frac{5}{10}$ $\quad 3\frac{2}{3} + 3\frac{1}{12} = 6\frac{9}{12}$

$3\frac{1}{2}$ $\quad 6\frac{3}{4}$

3. Complete each problem.

$50\overline{)5{,}681}$ R 113 R31 $\quad 10\overline{)374}$ R 37 R4 $\quad 20\overline{)437}$ R 21 R17

274 × 61	341 × 24	574 × 86	54 × 54
16,714	8,184	49,364	2,916

12 inches = 1 foot	3 feet = 1 yard
36 inches = 1 yard	5,280 feet = 1 mile

1 km = 1,000 m	1 m = 100 cm
1 cm = 10 mm	1 m = 1,000 mm

4. Complete each conversion.

60 in = 5 ft $\quad$ 800 cm = 8 m

3 mi = 15,840 ft $\quad$ 2,000 m = 2 km

8 yd = 288 in $\quad$ 5,000 mm = 5 m

5. Simplify each mixed number. Then write it as a decimal number.

$2\frac{9}{18}$ $\quad 2\frac{1}{2}$ $\quad 2.5$ $\quad 4\frac{15}{20}$ $\quad 4\frac{3}{4}$ $\quad 4.75$

6. Circle the fractions that have BOTH a numerator and a denominator that are prime numbers.

$\frac{3}{5}$ $\quad \frac{12}{20}$ $\quad \frac{2}{8}$ $\quad \frac{7}{11}$ $\quad \frac{8}{15}$ $\quad \frac{8}{20}$ $\quad \frac{13}{19}$

7. List all the factors of 24.

1, 2, 3, 4, 6, 8, 12, 24

Lesson Practice

1. Circle the correct words to make both statements true.

When converting from GRAMS to KILOGRAMS you MULTIPLY / (DIVIDE) by moving the decimal point three places to the (LEFT) / RIGHT.

When converting from KILOGRAMS to GRAMS you (MULTIPLY) / DIVIDE by moving the decimal point three places to the LEFT / (RIGHT).

2. Fill in the blanks in the chart below to complete each conversion.

How many grams are in 7 kilograms? 7 × 1,000 = 7,000 7.000 7 kilograms = 7,000 grams	How many kilograms are in 3,000 grams? 3,000 ÷ 1,000 = 3 3000. 3,000 grams = 3 kilograms
How many grams are in 7.73 kilograms? 7.73 × 1,000 = 7,730 7.730 7.73 kilograms = 7,730 grams	How many kilograms are in 2,700 grams? 2,700 ÷ 1,000 = 2.7 2700. 2,700 grams = 2.7 kilograms
How many grams are in 24 kilograms? 24 × 1,000 = 24,000 24 kilograms = 24,000 grams	How many kilograms are in 38,000 grams? 38,000 ÷ 1,000 = 38 38,000 grams = 38 kilograms
How many grams are in 4.265 kilograms? 4.265 × 1,000 = 4,265 4.265 kilograms = 4,265 grams	How many kilograms are in 61,000 grams? 61,000 ÷ 1,000 = 61 61,000 grams = 61 kilograms

3. Roll a pair of dice, add the numbers on the dice, and write the sum you rolled in the first blank box. Then complete each conversion.

Answers will vary

kg = g

,000 g = kg

,000 g = kg

kg = g

,000 g = kg

kg = g

kg = g

,000 g = kg

Review

16 oz = 1 lb
2,000 lb = 1 tn
1,000 g = 1 kg

1. Complete each conversion.

8 lb = 128 oz | 32 oz = 2 lb | 6,000 lb = 3 tn
12 lb = 192 oz | 6.35 kg = 6,350 g | 4,000 g = 4 kg

2. Simplify each fraction or mixed number, and then write each one as a decimal number.

$\frac{15}{20}$ $\frac{3}{4}$ 0.75 | $\frac{2}{8}$ $\frac{1}{4}$ 0.25 | $1\frac{10}{20}$ $1\frac{1}{2}$ 1.5 | $3\frac{4}{16}$ $3\frac{1}{4}$ 3.25

3. Add or subtract the mixed numbers and fraction. Then write the answers in simplest form in the gray boxes.

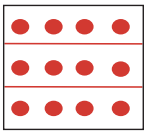
$5\frac{5}{12} - 1\frac{4}{24} = 4\frac{6}{24}$ $4\frac{1}{4}$ | $6\frac{1}{4} + \frac{2}{8} = 6\frac{4}{8}$ $6\frac{1}{2}$ | $2\frac{1}{6} + 1\frac{1}{2} = 3\frac{4}{6}$ $3\frac{2}{3}$

4. Complete each problem.

$30\overline{)6,442}$ = 214 R22 | $10\overline{)258}$ = 25 R8
$4\overline{)815}$ = 203 R3 | $10\overline{)3,250}$ = 325

5. Use the box to divide the number 12 into 3 equal groups. Then answer the question.

What is $\frac{2}{3}$ of 12? 8



6. Rewrite each problem vertically on scratch paper and complete it.

195.54 - 84.193 = 111.347
0.341 + 730.88 = 731.221
8.34 + 274.307 = 282.647

$8\overline{)64}$ 8 | $5\overline{)25}$ 5 | $4\overline{)16}$ 4 | $5\overline{)45}$ 9 | $4\overline{)36}$ 9 | $3\overline{)27}$ 9 | $5\overline{)35}$ 7 | $6\overline{)18}$ 3 | $6\overline{)30}$ 5 | $8\overline{)72}$ 9 | $12\overline{)108}$ 9 | $12\overline{)36}$ 3

TREASURE HUNT

Are you ready to go on a treasure hunt? Use the ordered pairs listed to find the path to the treasure chest. As you find each point, write the letter for that ordered pair in the box at the bottom of the next page. Connect the points in order as you travel across the map.

Path to the Treasure

(5, 1)
(6, 3)
(4, 3)
(3, 4)
(2, 6)
(5, 7)
(7, 7)
(7, 5)
(8, 3)
(9, 2)

Jewels of Logic

You found the treasure! The treasure chest is full of beautiful jewels. For each multiplication and division problem, find the missing number represented by the jewel, and write that number next to the jewel. Once you have found the number for a jewel, use that same number in the next problem working from top to bottom, and then up to the next column. Once it is completed, you will have solved for all the missing jewels, and you will find the last pieces to the puzzle in the box below.

Find this verse in your Bible and write it down on the lines provided.

C	o	l	o	s	s	i	a	n	s	2 : 3
(5,1)	(6,3)	(4,3)	(3,4)	(2,6)	(5,7)	(7,7)	(7,5)	(8,3)	(9,2)	

In whom are hid all the treasures of wisdom and knowledge.

All done! No review.

Garret	Sara
1. 112 × 42 = 4,704	1. 112 × 42 = 5,104
2. 382 × 19 = 7,258	2. 382 × 19 = 6,858
3. 217 × 24 = 6,208	3. 217 × 24 = 5,208
4. 92 R 8 / 632	4. 79 R 8 / 632
5. 35 R 13 / 455	5. 18 R 13 / 455
6. 31 R 19 / 399	6. 21 R 19 / 399

Lesson Practice

Garret and Sara completed the same homework assignment, but they got different answers for each problem. Use estimation to determine whose answer is likely correct, and then circle the name below.

1. **Garret** / Sara
2. **Garret** / Sara
3. Garret / **Sara**
4. Garret / **Sara**
5. **Garret** / Sara
6. Garret / **Sara**

7. Round each factor to the nearest ten, and then estimate the product.

234 × 67	230 × 70 = 16,100	
478 × 22	480 × 20 = 9,600	
127 × 39	130 × 40 = 5,200	

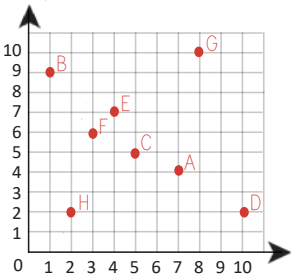
8. Estimate each quotient by using numbers that are easier to divide.

59 ⟌ 1,220	20 / 60 ⟌ 1200	
9 ⟌ 435	40 / 10 ⟌ 400	
22 ⟌ 595	30 / 20 ⟌ 600	

Answers may vary depending on the numbers the child chooses.

Review

1. Plot each of these points on the coordinate plane below. Remember, the first number in each ordered pair is found using the horizontal x-axis, and the second number is found using the vertical y-axis. Label each point with the correct letter.



A (7, 4)
B (1, 9)
C (5, 5)
D (10, 2)
E (4, 7)
F (3, 6)
G (8, 10)
H (2, 2)

2. Multiply or divide each decimal number by moving the decimal point.

1.49 × 10 = 14.9
37.5 × 100 = 3,750
2.568 × 1,000 = 2,568
547.3 ÷ 1,000 = 0.5473
2,478.1 ÷ 100 = 24.781
52.4 ÷ 10 = 5.24

16 oz = 1 lb
2,000 lb = 1 tn
1,000 g = 1 kg

3. Complete each conversion.

5 lb = 80 oz
48 oz = 3 lb
14,000 lb = 7 tn
10 lb = 160 oz
3.45 kg = 3,450 g
3,500 g = 3.5 kg

4. Complete each problem.

218 R4
40)8,724

46 R1
10)461

21 R7
30)637

340 × 22 = 7,480

537 × 46 = 24,702

5. Simplify each fraction and write it as a decimal number.

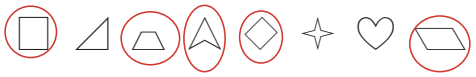
$\frac{3}{12}$ = $\frac{1}{4}$ = 0.25

$\frac{4}{8}$ = $\frac{1}{2}$ = 0.5

6. You finished your bike ride at 4:45 PM. The bike ride lasted 2 hours and 20 minutes. At what time did you start your bike ride?

2:25 PM

7. Circle all the quadrilaterals below.



8. Circle the pentagon. Put a box around the hexagon. Underline the oval.

Multiplication *MASTERY*

OPTIONAL: Time yourself to see how long this page takes you. Try to beat your previous time from Lesson 97.

TIME:

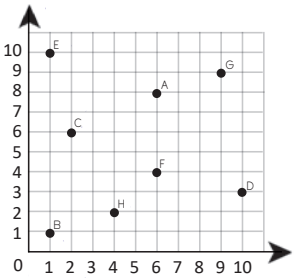
11 × 12 = 132	5 × 4 = 20	6 × 8 = 48	12 × 4 = 48	7 × 8 = 56	9 × 4 = 36	6 × 12 = 72	3 × 8 = 24	7 × 5 = 35	12 × 9 = 108	8 × 9 = 72	5 × 6 = 30	7 × 12 = 84	11 × 4 = 44
3 × 3 = 9	4 × 6 = 24	6 × 6 = 36	4 × 12 = 48	3 × 7 = 21	6 × 9 = 54	4 × 7 = 28	8 × 6 = 48	10 × 7 = 70	5 × 9 = 45	3 × 0 = 0	6 × 11 = 66	2 × 12 = 24	3 × 9 = 27
5 × 3 = 15	8 × 4 = 32	9 × 9 = 81	12 × 6 = 72	3 × 4 = 12	12 × 7 = 84	6 × 4 = 24	4 × 5 = 20	7 × 4 = 28	12 × 8 = 96	4 × 3 = 12	6 × 5 = 30	9 × 7 = 63	5 × 12 = 60
7 × 7 = 49	9 × 12 = 108	8 × 5 = 40	6 × 3 = 18	12 × 3 = 36	12 × 12 = 144	4 × 9 = 36	5 × 5 = 25	7 × 6 = 42	4 × 8 = 32	8 × 12 = 96	9 × 8 = 72	12 × 2 = 24	4 × 4 = 16
5 × 8 = 40	9 × 5 = 45	7 × 3 = 21	12 × 5 = 60	6 × 7 = 42	12 × 11 = 132	9 × 3 = 27	3 × 6 = 18	8 × 8 = 64	5 × 7 = 35	3 × 12 = 36	9 × 6 = 54	3 × 5 = 15	7 × 9 = 63

Lesson Practice

Work your way across the chessboard using mental math to complete each problem.

Review

1. Locate each point on the coordinate plane below. Write the ordered pair for each point. Remember, the first number in each ordered pair gives the horizontal position, and the second number gives the vertical position.



A (6 , 8)
B (1 , 1)
C (2 , 6)
D (10 , 3)
E (1 , 10)
F (6 , 4)
G (9 , 9)
H (4 , 2)

2. Multiply or divide each decimal number.

53.14 × 1,000 = 53,140 7.8 ÷ 10 = 0.78

16 oz = 1 lb
2,000 lb = 1 tn
1,000 g = 1 kg

3. Complete each conversion.

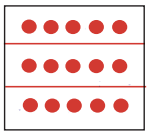
8 lb = 128 oz 16 oz = 1 lb 6,000 lb = 3 tn
20 lb = 320 oz 6.5 kg = 6,500 g 9,500 g = 9.5 kg

4. Subtract the mixed numbers, and then write the answer in simplest form in the gray box.

$7\frac{8}{10} - 3\frac{3}{5} = 4\frac{2}{10}$ $4\frac{1}{5}$

5. Use the box to help answer the questions.

What is $\frac{1}{3}$ of 15? 5 What is $\frac{2}{3}$ of 15? 10



6. Round the top factor to the nearest hundred and the bottom factor to the nearest ten, and then estimate the product.

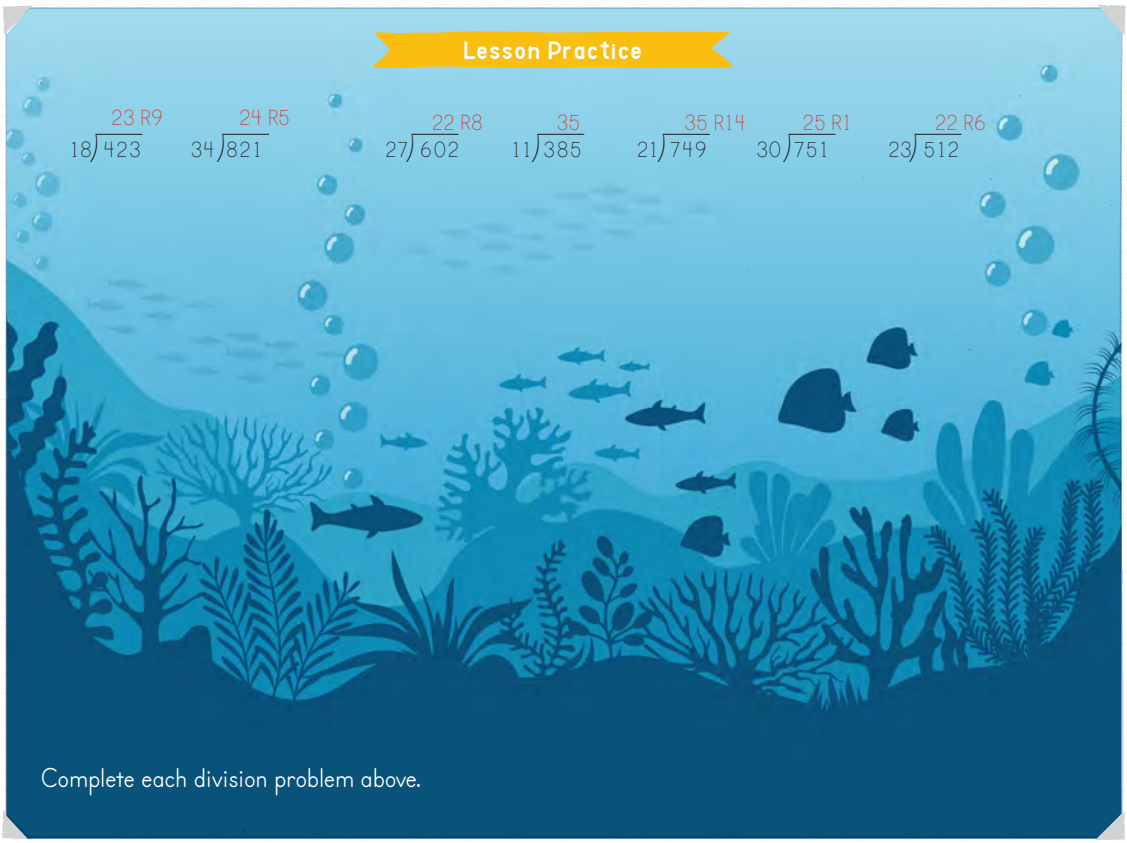
234 × 67 → 200 × 70 = 14,000
478 × 22 → 500 × 20 = 10,000
127 × 39 → 100 × 40 = 4,000

$3\overline{)9}$ $4\overline{)28}$ $8\overline{)40}$ $12\overline{)60}$ $5\overline{)35}$ $3\overline{)18}$ $9\overline{)45}$ $7\overline{)21}$ $6\overline{)54}$ $8\overline{)32}$ $12\overline{)132}$ $5\overline{)30}$

3 7 5 5 7 6 5 3 9 4 11 6

Lesson Practice

$18\overline{)423}$ = 23 R9 $34\overline{)821}$ = 24 R5 $27\overline{)602}$ = 22 R8 $11\overline{)385}$ = 35 $21\overline{)749}$ = 35 R14 $30\overline{)751}$ = 25 R1 $23\overline{)512}$ = 22 R6



Complete each division problem above.

Review

1. Multiply each decimal number by moving the decimal point.

$21.7 \times 10 = 217$

$4.678 \times 100 = 467.8$

$57.314 \times 1{,}000 = 57{,}314$

2. Simplify the fractions. Then write them as decimal numbers.

$\frac{6}{8}$ $\frac{3}{4}$ 0.75 $\frac{4}{16}$ $\frac{1}{4}$ 0.25

3. Round each decimal number to the nearest tenth.

35.24 35.2 7.89 7.9 18.62 18.6

4. Add or subtract the mixed numbers and fraction. Then write the answers in simplest form in the gray boxes.

$9\frac{16}{20} - 4\frac{1}{5} = 5\frac{12}{20}$ $5\frac{3}{5}$

$3\frac{1}{3} + \frac{4}{12} = 3\frac{8}{12}$ $3\frac{2}{3}$

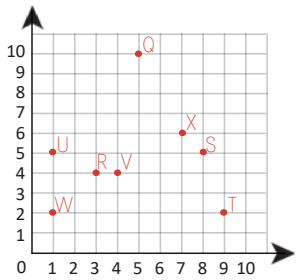
$2\frac{4}{14} + 2\frac{4}{7} = 4\frac{12}{14}$ $4\frac{6}{7}$

Read with your parent or teacher

It's time to review Multiplication Set C using the Multiplication Mastery Chart on page 395 with your parent or teacher.

Parent/Teacher: Quiz your child on Set C facts and indicate which facts your child has mastered in the "Reviewed" column on page 395. Practice any missed facts.

5. Plot each of these points on the coordinate plane below using the ordered pairs. Label each point with the correct letter.



Q	(5, 10)
R	(3, 4)
S	(8, 5)
T	(9, 2)
U	(1, 5)
V	(4, 4)
W	(1, 2)
X	(7, 6)

6. Estimate each quotient by using numbers that are easier to divide.

$16\overline{)327}$ $15\overline{)300}$ = 20 $22\overline{)624}$ $20\overline{)600}$ = 30

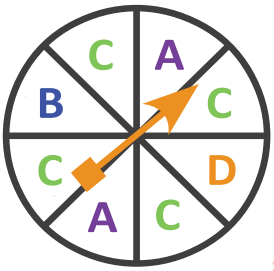
Answers may vary.

Lesson Practice

Read each scenario below, and then decide whether the probability of that event occurring is impossible, unlikely, likely, or certain.

1. I will eat dinner tonight. Answers will vary
   impossible unlikely likely certain
2. I will eat pizza for dinner tonight.
   impossible unlikely likely certain
3. Tomorrow will be Friday.
   impossible unlikely likely certain
4. Tomorrow I will read a book.
   impossible unlikely likely certain
5. I will do chores today.
   impossible unlikely likely certain
6. I will wash a car today.
   impossible unlikely likely certain
7. Someday I will learn to fly like a bird.
   impossible unlikely likely certain
8. Someday I will learn to drive a car.
   impossible unlikely likely certain

Use the spinner to answer the following questions.



1. What is the probability of landing on A? $\frac{2}{8}$ or $\frac{1}{4}$
2. What is the probability of landing on either A or C? $\frac{6}{8}$ or $\frac{3}{4}$
3. What is the probability of not landing on C? $\frac{4}{8}$ or $\frac{1}{2}$
4. Is there an equal chance of landing on B or D? yes
5. Is the spinner more likely to land on A or B? A
6. What is the probability of not landing on C or D? $\frac{3}{8}$
7. What is the probability of landing on E? $\frac{0}{8}$ or 0
8. What is the probability of landing on D? $\frac{1}{8}$

These toy cars are stored in this basket. Answer the questions below. Write your answers as a fraction when necessary.

1. Which color is most likely to be picked? red
2. What is the probability of picking a yellow car? $\frac{3}{10}$
3. What is the probability of picking a red car? $\frac{4}{10}$ or $\frac{2}{5}$
4. What is the probability of picking a blue car? $\frac{1}{10}$
5. Which color is least likely to be picked? blue
6. What is the probability of picking a car that is not green? $\frac{8}{10}$ or $\frac{4}{5}$
7. What is the probability of picking a car that is not red? $\frac{6}{10}$ or $\frac{3}{5}$
8. What is the probability of picking a car that is blue, red, or green? $\frac{7}{10}$

If you flip a quarter or drop it on a table, what is the probability that it will land heads up? $\frac{1}{2}$

What is the probability that it will land tails up? $\frac{1}{2}$

When you flip a coin, it is equally likely that it will land heads up or tails up. Let's test it out! You will flip a quarter, or drop it onto a table, 20 times and record the results on the chart below.

Make a prediction! Out of 20 flips, how many times do you think it will land heads up? _____ Tails up? _____ Answers will vary.

Flip #	Heads	Tails
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Flip #	Heads	Tails
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		


How many times did it land heads up?


How many times did it land tails up?

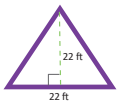
Were the results different than your prediction?

Review

1. Complete each conversion.

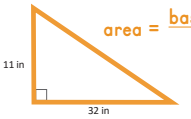
6 gal = 48 pt | 5 qt = 20 c | 8 pt = 4 qt | 16 c = 1 gal

2. Find the area of each triangle.



242 sq ft

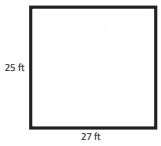
60 sq in



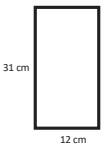
area = base × height / 2

176 sq in

3. Find the perimeter and area of the shapes below.



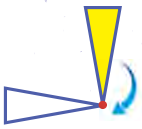
Perimeter = 104 ft
Area = 675 sq ft



Perimeter = 86 cm
Area = 372 sq cm

4. Each yellow shape below has been rotated. Label each rotation with the direction and degree of the turn.

90° counterclockwise



270° clockwise

5. Convert each improper fraction to a mixed number.

$\frac{17}{6}$ $2\frac{5}{6}$ | $\frac{7}{2}$ $3\frac{1}{2}$ | $\frac{23}{4}$ $5\frac{3}{4}$

6. Continue each pattern.

66, 55, 44, 33, 22, 11, 0 — Rule: subtract 11

103, 109, 115, 121, 127, 133 — Rule: add 6

24, 18, 12, 6, 0, -6, -12 — Rule: subtract 6

-25, -18, -11, -4, 3, 10, 17 — Rule: add 7

$12\overline{)36}=3$ $7\overline{)49}=7$ $4\overline{)16}=4$ $8\overline{)64}=8$ $7\overline{)63}=9$ $3\overline{)27}=9$ $9\overline{)81}=9$ $6\overline{)18}=3$ $4\overline{)20}=5$ $6\overline{)36}=6$ $12\overline{)72}=6$ $3\overline{)15}=5$

Lesson Practice

1. For each multiplication problem below, write the decimal point in the correct place in the answer. Write a comma if necessary.

3.27 × 3.6 = 11,772	6.14 × 29 = 178,06	13.8 × 40 = 552,0	1.31 × 5.7 = 7,467	2.046 × 37 = 75,702	7.15 × 0.5 = 3,575	2.29 × 17 = 38,93	1.375 × 63 = 86,625

2. For each problem circle the correct answer based on where the decimal point is placed.

57.314 × 16 = (A) 917.024 B) 9,170.24

275 × 2.7 = (A) 742.5 B) 7.425

5.62 × 32 = A) 1,798.4 (B) 179.84

113 × 2.537 = (A) 286.681 B) 28.6681

7 × 3.6 = A) 2.52 (B) 25.2

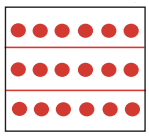
298.14 × 8 = A) 238.512 (B) 2,385.12

3. Complete each problem by multiplying and then writing the decimal point in the correct place.

21.6 × 24 = 518.4	1.294 × 7 = 9.058	4.34 × 1.8 = 781.2
8.57 × 54 = 462.78	1.47 × 3.6 = 529.2	32.87 × 2 = 65.74

Review

1. Use the box to help answer the questions.



What is $\frac{1}{3}$ of 18? 6

What is $\frac{2}{3}$ of 18? 12

2. Round each decimal number to the nearest whole number.

78.23 → 78 2.49 → 2 171.57 → 172

3. Subtract the mixed numbers, and then write the answer in simplest form in the gray box.

$6\frac{1}{4} - 2\frac{3}{12} =$ 4

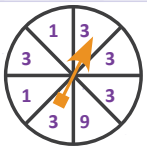
4

16 oz = 1 lb
2,000 lb = 1 tn
1,000 g = 1 kg

4. Complete each conversion.

11 tn = 22,000 lb
32 oz = 2 lb
4,000 lb = 2 tn
23 lb = 368 oz
7.5 kg = 7,500 g
9,000 g = 9 kg

Use the spinner to the right to determine if the probability of each event below is impossible, unlikely, likely, or certain.



5. The spinner will land on a 3.
impossible unlikely **likely** certain

6. The spinner will land on a 9.
impossible **unlikely** likely certain

7. The spinner will land on a 4.
impossible unlikely likely certain

8. The spinner will land on an odd number.
impossible unlikely likely **certain**

9. Divide each decimal number by moving the decimal point.

62.4 ÷ 10 = 6.24
937.4 ÷ 100 = 9.374
21,577 ÷ 1,000 = 21.577

3 × 3 = 9	2 × 0 = 0	8 × 11 = 88	4 × 4 = 16	12 × 3 = 36	6 × 10 = 60	5 × 6 = 30	7 × 3 = 21	12 × 5 = 60	6 × 3 = 18	4 × 5 = 20	5 × 7 = 35	12 × 4 = 48	5 × 3 = 15	6 × 6 = 36

Lesson Practice

Complete each division problem below. Use estimation and multiplication to help you find the correct quotient.

$18\overline{)176}$ = 9 R14
$50\overline{)306}$ = 6 R6
$39\overline{)137}$ = 3 R20
$28\overline{)259}$ = 9 R7
$42\overline{)204}$ = 4 R36
$64\overline{)321}$ = 5 R1
$23\overline{)154}$ = 6 R16
$41\overline{)402}$ = 9 R33

Review

1. Complete each problem by multiplying and then writing the decimal point in the correct place.

62.3 × 15 = 934.5	3.017 × 4 = 12.068	117 × 3.6 = 421.2

2. Simplify the fractions, and then write them as decimal numbers.

$\frac{9}{12}$	$\frac{3}{4}$	0.75	$\frac{12}{24}$	$\frac{1}{2}$	0.5

3. Round the top factor to the nearest hundred and the bottom factor to the nearest ten, and then estimate the product.

146 × 33	100 × 30 = 3,000	418 × 12	400 × 10 = 4,000	273 × 54	300 × 50 = 15,000

Tina has a basket full of apples, plums, and pears. Answer the questions below. Write the answers as fractions when necessary.

4. Which fruit is most likely to be picked? apples

5. What is the probability of picking a plum? $\frac{2}{10}$ or $\frac{1}{5}$

6. What is the probability of picking a fruit that is not an apple? $\frac{5}{10}$ or $\frac{1}{2}$

7. What is the probability of picking a pear? $\frac{3}{10}$

8. Which fruit is least likely to be picked? plum

9. Identify the rules and continue the patterns.

20, 15, 10, 5, 0, -5, -10 Rule: subtract 5

-20, -13, -6, 1, 8, 15 Rule: add 7

$6\overline{)48}$ = 8	$7\overline{)28}$ = 4	$4\overline{)32}$ = 8	$12\overline{)48}$ = 4	$8\overline{)24}$ = 3	$7\overline{)56}$ = 8	$3\overline{)12}$ = 4	$9\overline{)63}$ = 7	$7\overline{)42}$ = 6	$8\overline{)72}$ = 9	$12\overline{)120}$ = 10	$6\overline{)24}$ = 4

Lesson Practice

Fun Facts! A group of elephants is called a parade. A group of fish is called a school. A group of kangaroos is called a mob. A group of snakes is called a nest. A group of otters is called a family. A group of foxes is called a skulk.

Complete each problem below. If the answer matches an animal below, cross out the animal. The animal that is left is the answer to the riddle!

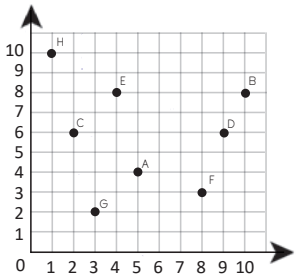
$2\overline{)268}$ = 134	$3\overline{)936}$ = 312	$4\overline{)484}$ = 121	$2\overline{)408}$ = 204	$7\overline{)917}$ = 131
$5\overline{)825}$ = 165	$3\overline{)843}$ = 281	$2\overline{)916}$ = 458	$8\overline{)328}$ = 41	$4\overline{)132}$ = 33

Review

1. Complete each problem by multiplying and then writing the decimal point in the correct place.

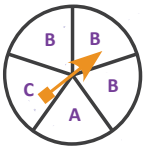
4.39 × 21 = 92.19	1.873 × 3 = 5.619	275 × 1.9 = 522.5

2. Locate each point on the coordinate plane below. Write the ordered pair for each point. Remember, the first number in each ordered pair gives the horizontal position, and the second number gives the vertical position.



A (5, 4)
B (10, 8)
C (2, 6)
D (9, 6)
E (4, 8)
F (8, 3)
G (3, 2)
H (1, 10)

3. Which letter are you most likely to land on, using the spinner to the right? B



4. What is the probability that you will land on the letter A? $\frac{1}{5}$

5. What is the probability that you will land on the letter A or a letter B? $\frac{4}{5}$

6. Arrange these decimal numbers from least to greatest. Then round each number to the nearest tenth.

	Least	Rounded
24.68	24.46	24.5
26.84	24.68	24.7
24.46	26.48	26.5
26.48	26.84	26.8
	Greatest	

7. Convert each improper fraction to a mixed number.

$\frac{21}{6} = 3\frac{3}{6}$ $\quad \frac{7}{2} = 3\frac{1}{2}$ $\quad \frac{47}{9} = 5\frac{2}{9}$ $\quad \frac{11}{4} = 2\frac{3}{4}$

8 × 4 = 32	7 × 9 = 63	7 × 4 = 28	9 × 3 = 27	5 × 5 = 25	6 × 8 = 48	12 × 6 = 72	8 × 8 = 64	3 × 4 = 12	8 × 5 = 40	7 × 6 = 42	12 × 7 = 84	8 × 7 = 56	7 × 7 = 49	12 × 8 = 96

Lesson Practice

1. Jarom, Ely, and Kaden have a lawn care business. In October they made $75.42 mowing lawns in their neighborhood. If they split the profits equally, how much money will each boy get?

$25.14

2. Kelleen and four of her friends sell loaves of bread at the local farmers market. On Saturday they made $127.55. If the 5 girls split the money equally, how much did each girl make?

$25.51

3. Marcos and Jenni watched their two younger brothers while their parents went on a date. Their parents paid them $23.50, and they split it equally. How much money did they each make?

$11.75

4. Beth, Lily, Joann, and Tiana raised a pig to sell at the county fair. Their pig sold for $272.92, and they split the money equally. How much did each girl make?

$68.23

5. Alberto and his friends put on a play and sold tickets to their friends and family members. They made $92.70 on tickets and split it between 10 people. How much did each child make?

$9.27

6. Every week Annika and Naomi set up a lemonade stand at the park. Together they made $86.34 and split it equally. How much did each girl make?

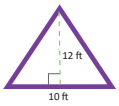
$43.17

Review

1. Complete each problem by multiplying and then writing the decimal point in the correct place.

39.4 × 37 = 1,457.8	4.816 × 2 = 9.632	1 2 4 × 4.4 = 545.6

2. Find the area of each triangle.



60 sq ft

132 sq in

See the Reference Guide on page 394.

16 oz = 1 lb
2,000 lb = 1 tn
1,000 g = 1 kg

3. Complete each conversion.

18 tn = 36,000 lb	16 oz = 1 lb	10,000 lb = 5 tn
14 lb = 224 oz	1 kg = 1,000 g	6,000 g = 6 kg

4. Complete each problem. You may use long or short division.

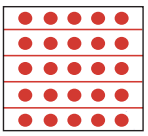
243 ÷ 23 = 5,589	203 ÷ 4 = 812	58 ÷ 12 = 696

5. Add or subtract the mixed numbers, and then write the answers in simplest form in the gray boxes.

$4\frac{20}{36} - 1\frac{1}{6} = 3\frac{14}{36}$ → $3\frac{7}{18}$

$4\frac{1}{3} + 5\frac{4}{15} = 9\frac{9}{15}$ → $9\frac{3}{5}$

6. Use the box to help answer the questions.



What is $\frac{1}{5}$ of 25? 5

What is $\frac{4}{5}$ of 25? 20

5	7	6	8	4	7	9	9	3	5	11	7
6/30	6/42	9/54	9/72	5/20	8/56	4/36	5/45	5/15	5/25	12/132	12/84

There are two steps for finding the mean of a group of numbers:

1. Find the sum of all the numbers in the group.
2. Divide the sum by the number of addends.

Look at the pencil box example again. The number of pencils in each box was 4, 3, and 5. To find the mean, first find the sum of these numbers.

$4 + 3 + 5 = 12$

Now divide the sum (12) by the number of addends. There are 3 numbers that we added, so divide 12 by 3.

$12 \div 3 = 4$

The mean is 4.

Find the mean of the children's ages above.

1. Find the sum of all the ages in the group.

$4 + 8 + 7 + 6 + 9 + 8 = 42$

2. Divide the sum by the number of addends, in this case the number of children.

$42 \div 6 = 7$

The mean, or average age, for this group of children is 7 years old.

Lesson Practice

For each group of children below, find the mean of the children's ages by adding all the ages together and then dividing the sum by the number of children in the group.

5

7

11

7

12

Review

16 oz = 1 lb
2,000 lb = 1 tn
1,000 g = 1 kg

1. Complete each conversion.

5 tn = 10,000 lb
32 oz = 2 lb
8,000 lb = 4 tn
11 lb = 176 oz
3 kg = 3,000 g
12,000 g = 12 kg

2. Complete each problem. Write the decimal point in the quotient directly above the decimal point in the dividend.

4.21) 8 33.68
1.35) 5 6.75
1.6) 8 12.8

3. Complete each problem by multiplying and then writing the decimal point in the correct place.

42.7 × 12 = 512.4
3.457 × 5 = 17.285
227 × 3.4 = 771.8

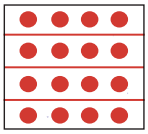
4. Multiply each decimal number by moving the decimal point.

72.7 × 10 = 727
12.78 × 100 = 1,278
8.32 × 1,000 = 8,320

5. Convert each improper fraction to a mixed number.

$\frac{7}{4}$ $1\frac{3}{4}$ $\frac{13}{8}$ $1\frac{5}{8}$ $\frac{22}{5}$ $4\frac{2}{5}$

6. Use the box to help answer the questions.



What is $\frac{2}{4}$ of 16? 8
What is $\frac{3}{4}$ of 16? 12

7. Round each decimal number to the nearest whole number.

72.14 72 3.71 4 67.35 67 42.33 42

8. Now round each decimal number to the nearest tenth.

72.14 72.1 3.71 3.7 67.35 67.4 42.33 42.3

Read with your parent or teacher

It's time to review Multiplication Set D using the Multiplication Mastery Chart on page 395 with your parent or teacher.

Parent/Teacher: Quiz your child on Set D facts and indicate which facts your child has mastered in the "Reviewed" column on page 395. Practice any missed facts.

AIRPLANE Averages

Each child below threw a paper airplane several times and recorded the distance it flew (in feet) each time. For each set of numbers, determine the mean, median, mode, and range.

Find the MEAN:
1. Find the sum of all the numbers.
2. Divide the sum by the number of addends.

Find the MEDIAN:
1. List the numbers from least to greatest.
2. Cross off numbers, alternating sides, until one is left.

Find the MODE:
List the number or numbers that appear most often.

Find the RANGE:
Subtract the smallest number from the largest number.

18, 27, 18
Mean: 21
Median: 18
Mode: 18
Range: 9

10, 7, 5, 7, 4, 9, 7
Mean: 7
Median: 7
Mode: 7
Range: 6

23, 42, 31
Mean: 32
Median: 31
Mode: none
Range: 19

6, 3, 5, 3, 4, 1, 7, 2, 5
Mean: 4
Median: 4
Mode: 3 & 5
Range: 6

13, 12, 9, 12, 14
Mean: 12
Median: 12
Mode: 12
Range: 5

16, 12, 19, 17, 11
Mean: 15
Median: 16
Mode: none
Range: 8

Review

1. Complete each conversion.

4 gal = 32 pt	7 qt = 28 c
12 pt = 6 qt	32 c = 2 gal
1,000 mL = 1 L	7 L = 7,000 mL

2. Complete each problem. Write the decimal point in the quotient directly above the decimal point in the dividend.

$4\overline{)31.44}$ → 7.86 $\quad 5\overline{)12.5}$ → 2.5 $\quad 12\overline{)64.8}$ → 5.4

3. Complete each problem by multiplying and then writing the decimal point in the correct place.

7.26 × 19 = 137.94	8.312 × 2 = 16.624	412 × 1.8 = 741.6

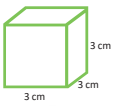
4. Divide each decimal number by moving the decimal point.

17.85 ÷ 10 = 1.785
762.0 ÷ 100 = 7.62
245.3 ÷ 1,000 = 0.2453

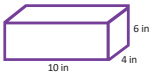
5. Add or subtract the mixed numbers. Then write the answers in simplest form in the gray boxes.

$7\frac{3}{4} - 5\frac{5}{12} = 2\frac{4}{12}$ → $2\frac{1}{3}$ $\qquad 2\frac{3}{15} + 1\frac{1}{5} = 3\frac{6}{15}$ → $3\frac{2}{5}$

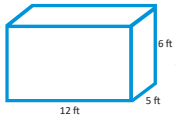
6. Find the volume of each solid.



27 cubic cm



240 cubic in

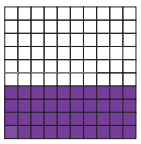


360 cubic ft

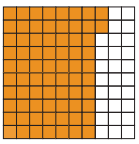
$3\overline{)21}$ → 7 $\quad 5\overline{)40}$ → 8 $\quad 9\overline{)27}$ → 3 $\quad 9\overline{)36}$ → 4 $\quad 4\overline{)24}$ → 6 $\quad 12\overline{)96}$ → 8 $\quad 4\overline{)16}$ → 4 $\quad 5\overline{)25}$ → 5 $\quad 6\overline{)36}$ → 6 $\quad 7\overline{)49}$ → 7 $\quad 12\overline{)144}$ → 12 $\quad 8\overline{)64}$ → 8

Lesson Practice

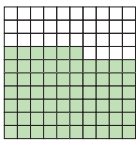
1. Write the fraction and percent represented by the shaded part of each grid.



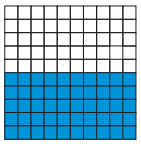
$\frac{40}{100}$ 40%



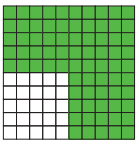
$\frac{72}{100}$ 72%



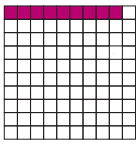
$\frac{66}{100}$ 66%



$\frac{50}{100}$ or $\frac{1}{2}$ 50%

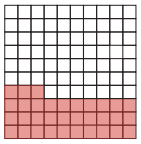


$\frac{75}{100}$ or $\frac{3}{4}$ 75%

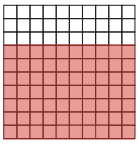


$\frac{9}{100}$ 9%

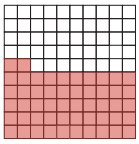
2. Color each grid to show the percent given.



$\frac{33}{100}$ = 33%



$\frac{70}{100}$ = 70%



$\frac{52}{100}$ = 52%

3. In the box above are 100 butterflies. Count each type of butterfly, and then write the fraction and percent it represents next to its picture. For example, if there were 14 purple butterflies you would write $\frac{14}{100}$ 14%.

$\frac{20}{100}$ 20%

$\frac{26}{100}$ 26%

$\frac{32}{100}$ 32%

$\frac{22}{100}$ 22%

Review

1. Complete each problem. Write the decimal point in the quotient directly above the decimal point in the dividend.

$3\overline{)40.26} = 13.42$ $\quad 6\overline{)49.8} = 8.3$ $\quad 22\overline{)72.6} = 3.3$

2. Complete each problem by multiplying and then writing the decimal point in the correct place.

56.3 × 42 = 2,364.6	3.117 × 5 = 15.585	724 × 2.3 = 1,665.2

3. Arrange these decimal numbers from least to greatest. Then round each number to the nearest tenth.

	Least	Rounded
17.52	17.25	17.3
17.25	17.52	17.5
17.55	17.55	17.6
	Greatest	

4. Find the mean, median, mode, and range for each set of numbers.

12, 11, 9, 14, 7, 3, 7	22, 31, 19, 19, 24
Mean: 9	Mean: 23
Median: 9	Median: 22
Mode: 7	Mode: 19
Range: 11	Range: 12

12 inches = 1 foot	3 feet = 1 yard
36 inches = 1 yard	5,280 feet = 1 mile

1 km = 1,000 m 1 m = 100 cm
1 cm = 10 mm 1 m = 1,000 mm

5. Complete each conversion.

48 in = 4 ft 400 cm = 4 m
2 mi = 10,560 ft 13,000 m = 13 km
4 yd = 144 in 40 mm = 4 cm

6. Simplify the fractions, and then write them as decimal numbers.

$\frac{8}{32} = \frac{1}{4} = 0.25$ $\frac{9}{18} = \frac{1}{2} = 0.5$

7. Identify the rules and continue the patterns.

36, 30, 24, 18, 12, 6, 0, -6, -12 Rule: subtract 6
-23, -18, -13, -8, -3, 2, 7, 12 Rule: add 5

Find the MEAN:
1. Find the sum of all the numbers.
2. Divide the sum by the number of addends.

Find the MEDIAN:
1. List the numbers from least to greatest.
2. Cross off numbers, alternating sides, until one is left.

Find the MODE:
List the number or numbers that appear most often.

Find the RANGE:
Subtract the smallest number from the largest number.

Multiplication *MASTERY*

OPTIONAL: Time yourself to see how long this page takes you. Try to beat your previous time from Lesson 106.

TIME:

11 × 12 = 132	5 × 4 = 20	6 × 8 = 48	12 × 4 = 48	7 × 8 = 56	9 × 4 = 36	6 × 12 = 72	3 × 8 = 24	7 × 5 = 35	12 × 9 = 108	8 × 9 = 72	5 × 6 = 30	7 × 12 = 84	11 × 4 = 44
3 × 3 = 9	4 × 6 = 24	6 × 6 = 36	4 × 12 = 48	3 × 7 = 21	6 × 9 = 54	4 × 7 = 28	8 × 6 = 48	10 × 7 = 70	5 × 9 = 45	3 × 0 = 0	6 × 11 = 66	2 × 12 = 24	3 × 9 = 27
5 × 3 = 15	8 × 4 = 32	9 × 9 = 81	12 × 6 = 72	3 × 4 = 12	12 × 7 = 84	6 × 4 = 24	4 × 5 = 20	7 × 4 = 28	12 × 8 = 96	4 × 3 = 12	6 × 5 = 30	9 × 7 = 63	5 × 12 = 60
7 × 7 = 49	9 × 12 = 108	8 × 5 = 40	6 × 3 = 18	12 × 3 = 36	12 × 12 = 144	4 × 9 = 36	5 × 5 = 25	7 × 6 = 42	4 × 8 = 32	8 × 12 = 96	9 × 8 = 72	12 × 2 = 24	4 × 4 = 16
5 × 8 = 40	9 × 5 = 45	7 × 3 = 21	12 × 5 = 60	6 × 7 = 42	12 × 11 = 132	9 × 3 = 27	3 × 6 = 18	8 × 8 = 64	5 × 7 = 35	3 × 12 = 36	9 × 6 = 54	3 × 5 = 15	7 × 9 = 63

Lesson 117

REVIEW GAME: UNITS 1 AND 2

- Complete today's *Math 4 Mental Math Map Mysteries* activity.
- There are no more videos, mini lessons, or practice!

Welcome to Italy! In the next two lessons, we will be taking a trip across the country of Italy, visiting different cities while reviewing some of the most important skills you've learned throughout this course. Follow the itinerary below to move from city to city. Complete each of the problems on the postcard for that city before moving on to the next city.

DAY 1
Your plane lands in Italy at 4:45 PM. The plane ride lasted 2 hours and 20 minutes. At what time did you board the plane?

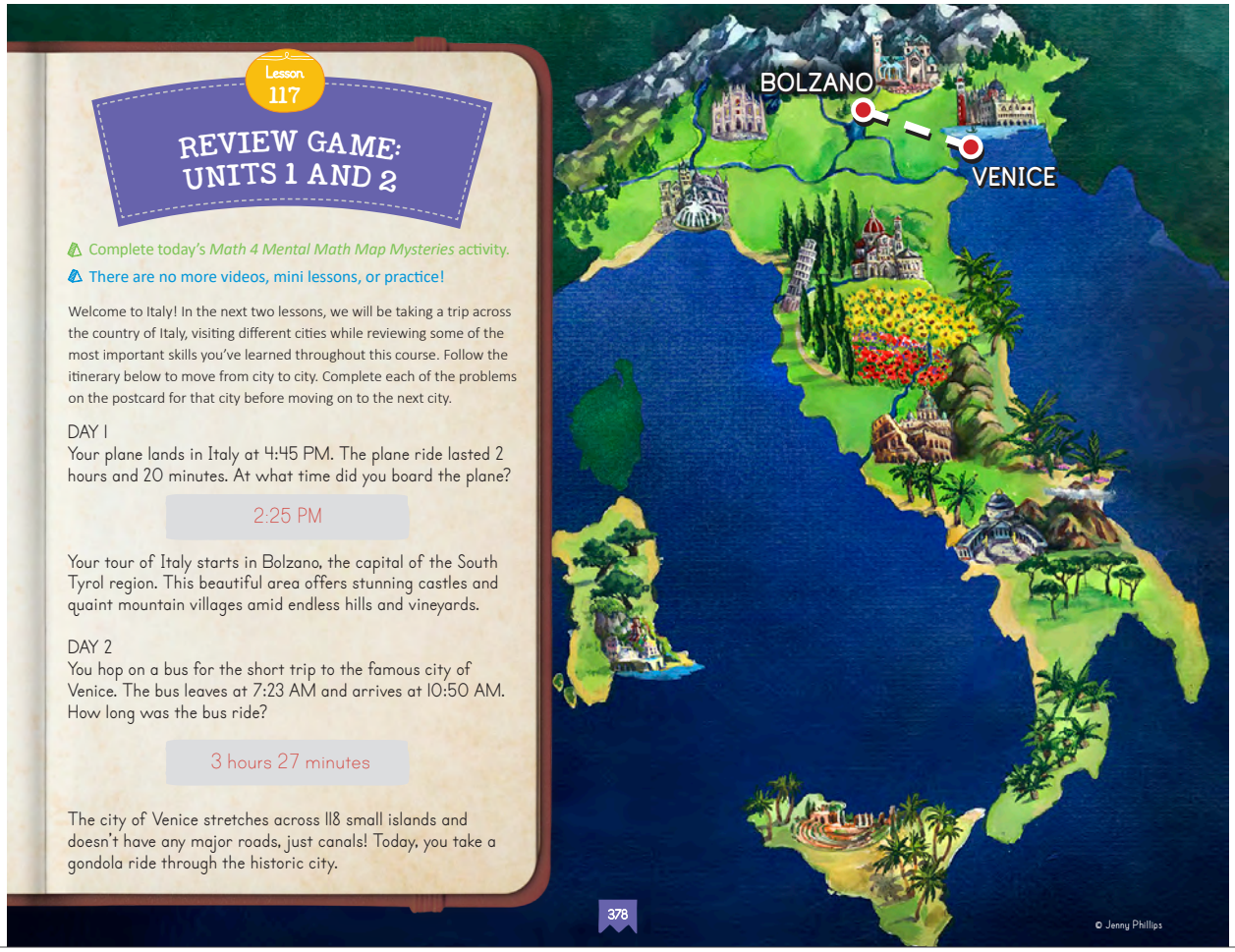
2:25 PM

Your tour of Italy starts in Bolzano, the capital of the South Tyrol region. This beautiful area offers stunning castles and quaint mountain villages amid endless hills and vineyards.

DAY 2
You hop on a bus for the short trip to the famous city of Venice. The bus leaves at 7:23 AM and arrives at 10:50 AM. How long was the bus ride?

3 hours 27 minutes

The city of Venice stretches across 118 small islands and doesn't have any major roads, just canals! Today, you take a gondola ride through the historic city.



"Salve!" from CINQUE TERRE

AIR MAIL 3

Complete each conversion.

9 L = 9,000 mL
7,000 mL = 7 L
16 qt = 4 gal
8 c = 4 pt

24 in = 2 ft
5 yd = 15 ft
900 cm = 9 m
21,000 m = 21 km

2 tn = 4,000 lb
3 lb = 48 oz
2,000 g = 2 kg
5 kg = 5,000 g

GREETINGS FROM PISA

AIR MAIL 9

Complete each problem. You may use long or short division.

21 R17
21) 458

2.54
3) 7.62

10.8
8) 86.4

Divide each decimal number by moving the decimal point.

12.91 ÷ 10 = 1.291
3,792 ÷ 100 = 37.92
713.2 ÷ 1,000 = 0.7132
283.4 ÷ 10 = 28.34
517.3 ÷ 100 = 5.173
1,495 ÷ 1,000 = 1.495

MILAN

AIR MAIL 7

Use multiplication to complete each problem. If multiplying by a decimal number, make sure to write the decimal point in the product.

1.23 × 42 = 51.66
4.253 × 3 = 12.759
524 × 13 = 6,812
231 × 15 = 3,465

Multiply each decimal number by moving the decimal point.

32.5 × 10 = 325
542.25 × 100 = 54,225
9.02 × 1,000 = 9,020
7.21 × 10 = 72.1
2.465 × 100 = 246.5
71.98 × 1,000 = 71,980

© Jenny Phillips

DAY 3
Today, you'll see the sights of Milan, Italy. Although Milan is best known for its thriving fashion industry, you are more interested in the famous artwork on display here, including "The Last Supper" by Leonardo da Vinci.

DAY 4
You board a train at 8:30 AM for a 2-hour-and-47-minute ride to Cinque Terre. What time does your train arrive?

11:17 AM

Cinque Terre means "Five Lands" in Italian, and that's exactly what it is: a string of five colorful fishing villages perched on rugged cliffs above the sea. Sample some of the amazing seafood while you're here!

DAY 5
Today, you are in the city of Pisa, so, of course, you plan to visit the Leaning Tower of Pisa. The tower is a campanile, or freestanding bell tower, for the Pisa Cathedral that it stands behind. Construction began in 1173 on the 183-foot tower, which was already leaning when construction was completed 200 years later, due to an unstable foundation. Today, the tower, a famous tourist destination, leans at a 4-degree angle.

Lesson 118

REVIEW GAME: UNITS 3 AND 4

Complete today's *Math 4 Mental Math Map Mysteries* activity.

Are you ready to continue exploring the country of Italy? Let's get started. Remember to follow the itinerary below and to complete each of the problems in that specific city box before moving on to the next city.

DAY 6
You leave Pisa and head for Florence. You start driving at 9:05 AM and drive for 1 hour and 22 minutes. What time do you arrive?

10:27 AM

You're only passing through Florence, but you drive by the Florence Cathedral with its amazing terracotta-tiled dome.

Three hours later you arrive in Rome, the capital of Italy. You're excited to see the ruins of Ancient Rome, like the Pantheon and Colosseum.

DAY 7
Today's itinerary takes you to the archaeological site of Pompeii to stand in the shade of Mount Vesuvius, the famous volcano that covered the thriving town with ashes in 79 AD.

Visit Picturesque POMPEII

Find the area of each triangle.

5 in, 6 in: 15 sq in

8 in, 11 in: 44 sq in

Find the perimeter and area of the shape below.

12 in, 7 in

Perimeter = 38 in

Area = 84 sq in

Find the volume of each solid.

2 ft, 2 ft, 2 ft: 8 cubic ft

9 in, 4 in, 2 in: 72 cubic in

AIR MAIL 2

ROAMING IN ROME, ITALY

Continue the pattern.

-20, -15, -10, -5, 0, 5, 10

List THREE factor pairs of 12.

1 × 12, 2 × 6, 3 × 4 also correct: 12 × 1, 6 × 2, 4 × 3

List FIVE multiples of 8, starting at 24. Answers may vary.

24, 32, 40, 48, 56

Convert from factored form to exponent form.

2 × 2 × 2 × 2 = 2^4

3 × 3 × 3 × 3 × 3 = 3^5

7 × 7 × 7 × 7 × 7 × 7 × 7 × 7 = 7^8

5 × 5 × 5 = 5^3

4 × 4 = 4^2

AIR MAIL 4

Add or subtract the mixed numbers, and then write the answers in simplest form in the gray boxes.

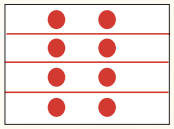
$5\frac{11}{12} - 2\frac{1}{6} = 3\frac{3}{4}$

$3\frac{1}{2} + 2\frac{2}{8} = 5\frac{3}{4}$

Convert each improper fraction to a mixed number.

$\frac{11}{4} = 2\frac{3}{4}$ $\frac{13}{8} = 1\frac{5}{8}$

Use the box to divide the number 8 into 4 equal groups and answer the question.

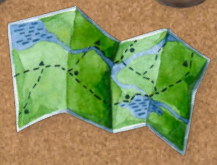


What is $\frac{3}{4}$ of 8?

6

AIR MAIL 5

FLORENCE, ITALY



DAY 8
Early in the morning, you board a boat for the small Italian island of Sardinia, famous for its beautiful clear waters and pristine beaches. Time for some swimming!

DAY 9
Your tour of Italy stops on the island of Sicily, home to Mount Etna (an active volcano). Here you will visit the ruins of several ancient Greek temples in the Valley of the Temples.

The country of Italy is a peninsula. In Italian it is nicknamed ***Lo Stivale.*** There are three smaller peninsulas that branch off of the main one. In Italian they are named ***Calabria***, ***Salento***, and ***Gargano***.

To translate each of these Italian words, use the "Air Mail" numbers hidden on each postcard to fill in the missing letters. Use the red letters found in each city name.

LO STIVALE	B (1)	O (2)	O	T (3)
CALABRIA	T (4)	O	E (5)	
SALENTO	H	E (6)	E	L (7)
GARGANO	S (8)	P (9)	U	R (10)

LESSONS 119-120

COURSE ASSESSMENT

Parent/Teacher

Read the following information aloud to the child: This assessment is different from the others you have taken in this course. Instead of covering only concepts taught in Unit 4, this assessment covers concepts you have learned throughout the entire course. Problems in this assessment have been carefully designed to assess you on multiple skills at once. For example, a single long division question can cover the long division steps, division with zero in the quotient, dividing by two-digit numbers, and dividing decimals. A question on rounding can assess place value, rounding, and decimal numbers. This assessment does not cover every skill you learned in Math 4. Instead, it focuses on skills you need to know as you start Math 5.

Here are some tips. First, make sure to read the instructions carefully. Second, do not rush through exercises you think you already know. Third, if you start to get frustrated with one section, try skipping to a different section and then coming back later. The sections do not need to be completed in order.

For Lesson 119 complete all the exercises with PURPLE headers ONLY. Your parent or teacher will correct the work. If you make one or more mistakes in a section, your parent or teacher will check the orange "Additional Practice" checkbox for that section.

For Lesson 120 complete all the orange sections **that are checked**. If you still have trouble with the concept, go back and rewatch the video or reread the mini lesson for that topic.

Student

DECIMAL NUMBERS
(LESSONS 76, 87 & 103)

Rewrite each problem vertically and complete it.

241.62 + 92.107 = 333.727

175.845 - 47.5 = 128.345

Divide or multiply each number by moving the decimal point.

22.47 ÷ 10 = 2.247
195.3 ÷ 100 = 1.953
12,347 ÷ 1,000 = 12.347
4.32 × 10 = 43.2
7.489 × 100 = 748.9
1.234 × 1,000 = 1,234

In the number below, circle the digit in the thousandths place. Draw a square around the digit in the tenths place. Cross out the digit in the hundredths place.

2,487.951 (9 in a square, 5 crossed out, 1 circled)

Additional Practice

Complete each problem.

12.75 + 0.47 = 13.22

157.12 - 41.24 = 115.88

Divide or multiply each decimal number by moving the decimal point.

21.8 ÷ 10 = 2.18
634.2 ÷ 100 = 6.342
321.7 ÷ 1,000 = 0.3217
0.78 × 10 = 7.8
27.87 × 100 = 2,787
2.0478 × 1,000 = 2,047.8

Circle the digit in the hundredths place.

14,517.398 (9 circled)

LONG DIVISION
(LESSONS 41, 47, 51, 63, 69, 77, 81, 97, 101, 111 & 113)

Complete each division problem. Remember to write the decimal point in the quotient if necessary.

6)214.2 = 35.7

18)367.2 = 20.4

10)6,842 = 684 R2

32)7,148 = 223 R12

Additional Practice

Complete each division problem. Remember to write the decimal point in the quotient if necessary.

4)15.24 = 3.81

21)472.08 = 22.48

10)3,619 = 361 R9

45)5,012 = 111 R17

EXPONENTS & PRIME NUMBERS
(LESSONS 37 & 52)

Convert from factored form to exponent form.

2 × 2 × 2 = 2^3
5 × 5 × 5 × 5 × 5 = 5^5
8 × 8 × 8 × 8 × 8 × 8 = 8^6
3 × 3 × 3 × 3 = 3^4

Circle all the prime numbers in the box below.

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

(Circled: 2, 3, 5, 7, 11, 13, 17)

Fill in the perfect squares in the chart. The first one has been done.

4^2	16
8^2	64
2^2	4
5^2	25
3^2	9
9^2	81

Additional Practice

Convert from exponent form to factored form.

4^6 = 4 × 4 × 4 × 4 × 4 × 4
7^3 = 7 × 7 × 7
9^5 = 9 × 9 × 9 × 9 × 9
6^2 = 6 × 6

Circle all the composite numbers in the box below.

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

(Circled: 4, 6, 8, 9, 10, 12, 14, 15, 16, 18)

Fill in the perfect squares in the chart. The first one has been done.

11^2	121
4^2	16
10^2	100
7^2	49
6^2	36
12^2	144

MULTIPLICATION
(LESSONS 26, 32, 61, 84, 86, 95 & 110)

Complete each multiplication problem. Remember to write the decimal point in the answer if necessary.

11 × 300 = 3,300

8 × 5,000 = 40,000

7 × 40,000 = 280,000

12 × 20 = 240

73.4 × 18 = 1,321.2	2.419 × 6 = 14.514	682 × 7.4 = 5,046.8

Additional Practice

Complete each multiplication problem. Remember to write the decimal point in the answer if necessary.

5.13 × 25 = 128.25	1.549 × 8 = 12.392	432 × 6.6 = 2,851.2

9 × 7,000 = 63,000

12 × 400 = 4,800

CONVERSIONS
(LESSONS 31, 33, 79, 80, 102 & 104)

Complete each conversion.

24 in = 2 ft

7 yd = 21 ft

100 cm = 1 m

9 km = 9,000 m

3 tn = 6,000 lb

3,000 g = 3 kg

16 oz = 1 lb

6 kg = 6,000 g

12 c = 6 pt

4 gal = 16 qt

2,000 mL = 2 L

23 L = 23,000 mL

Additional Practice

Complete each conversion.

5,280 ft = 1 mi

18 ft = 6 yd

8,000 lb = 4 tn

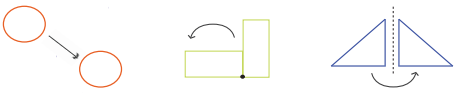
5,000 g = 5 kg

1 gal = 8 pt

12 pt = 24 c

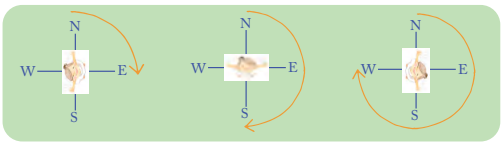
TRANSFORMATIONS & TURNS
(LESSONS 64 & 65)

Label each geometric transformation.



translation | rotation | reflection

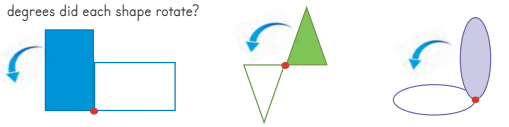
Write the measurement in degrees of each clockwise turn.



90° | 180° | 270°

Additional Practice

Each shape was rotated counterclockwise around the red point. How many degrees did each shape rotate?



270° | 180° | 90°

Which geometric transformation needs to happen to move the blue triangle directly on top of the green triangle?

translation

FRACTIONS
(LESSONS 35, 48, 53, 66, 67, 72 & 99)

Convert each improper fraction to a mixed number.

$\frac{19}{5} = 3\frac{4}{5}$ $\frac{11}{2} = 5\frac{1}{2}$

$\frac{30}{7} = 4\frac{2}{7}$ $\frac{23}{4} = 5\frac{3}{4}$

Add or subtract, and then write the answers in simplest form in the gray boxes.

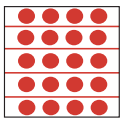
$6\frac{3}{5} - 2\frac{2}{10} = 4\frac{4}{10}$

$4\frac{2}{5}$

Use the box to help answer the question.

What is $\frac{3}{5}$ of 20?

12



$3\frac{8}{16} + 3\frac{1}{4} = 6\frac{12}{16}$

$6\frac{3}{4}$

Additional Practice

Add, and then write the answer in simplest form in the gray box.

$1\frac{8}{20} + 4\frac{2}{4} = 5\frac{18}{20}$

$5\frac{9}{10}$

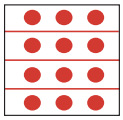
Convert each improper fraction to a mixed number.

$\frac{14}{3} = 4\frac{2}{3}$ $\frac{23}{6} = 3\frac{5}{6}$ $\frac{17}{8} = 2\frac{1}{8}$

Use the box to help answer the question.

What is $\frac{3}{4}$ of 12?

9



ORDER OF OPERATIONS & PATTERNS
(LESSONS 40, 85, 91 & 94)

Use the order of operations to complete each problem.

$10 \times (8 + 4) + 2 =$ 122

$3^2 + 15 - (40 \div 8) =$ 19

$24 \div (12 \div 2) + 4^2 =$ 20

Identify the rules and continue the patterns.

32, 24, 16, 8, 0, -8, -16, -24 Rule: subtract 8

-26, -19, -12, -5, 2, 9, 16 Rule: add 7

Additional Practice

Identify the rules and continue the patterns.

-19, -14, -9, -4, 1, 6, 11, 16 Rule: add 5

15, 11, 7, 3, -1, -5, -9, -13 Rule: subtract 4

Use the order of operations to complete each problem.

$10 + 30 \div (3 \times 5) =$ 12

$6^2 - 8 \times 2 + 4 =$ 24

$32 - (16 + 7) + 3^2 =$ 18

ELAPSED TIME
(LESSONS 18 & 25)

Karen is running in a 10K race. She starts at 8:42 AM and finishes at 10:08 AM. How long did it take Karen to complete the race?

1 hour 26 minutes

6:48 PM

Carlos baked four dozen cookies for a bake sale at his church. He started at 2:32 PM, and it took him 4 hours and 16 minutes. What time did he finish baking?

Additional Practice

At 9:51 AM you started your science lesson. At 11:24 AM you finished the last problem. How long did the lesson take you to complete?

1 hour 33 minutes

2:44 PM

Next, you started working on a writing project. You started at 12:37 PM, and it took 2 hours and 7 minutes to complete. What time did you finish writing?

MULTIPLES & FACTORS
(LESSON 42)

List the multiples of 3 from 3 to 30.

3, 6, 9, 12, 15, 18, 21, 24, 27, 30

List the multiples of 8 from 8 to 80.

8, 16, 24, 32, 40, 48, 56, 64, 72, 80

Write all the factors for each number below.

12
1 × 12
2 × 6
3 × 4
1, 2, 3, 4, 6, 12

16
1 × 16
2 × 8
4 × 4
1, 2, 4, 8, 16

21
1 × 21
3 × 7
1, 3, 7, 21

Additional Practice

List the multiples of 6 from 6 to 60.

6, 12, 18, 24, 30, 36, 42, 48, 54, 60

Find the missing factors.

28
2 × 14
4 × 7

36
3 × 12
6 × 6

40
5 × 8
10 × 4

PLACE VALUE, ROUNDING & COMPARING
(LESSONS 7, 11, 19, 92, 93 & 98)

Arrange the decimal numbers from greatest to least. Then round each number to the nearest tenth.

	Greatest	Rounded
24.53	24.75	24.8
24.75	24.53	24.5
23.58	23.58	23.6
	Least	

Circle the digit in the ten thousands place. Put a box around the digit in the millions place. Underline the digit in the ones place. Round the number to the nearest million.

4,612,854

5,000,000

Additional Practice

Circle the digit in the hundreds place. Put a box around the digit in the ten thousands place. Underline the digit in the tens place. Round the number to the nearest million.

2,742,684

3,000,000

Now round the same number to the hundred thousands place.

2,742,684

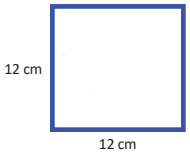
2,700,000

Arrange these decimal numbers from least to greatest.

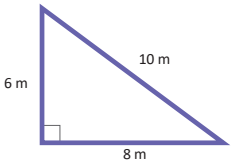
	Least
321.017	321.017
321.170	321.071
321.071	321.107
321.107	321.170
	Greatest

AREA, PERIMETER & VOLUME
(LESSONS 36, 56, 68 & 71)

Find the perimeter of each shape.

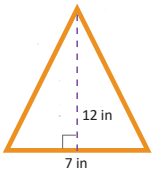


Perimeter = 48 cm



Perimeter = 24 m

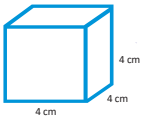
Find the area of each shape.



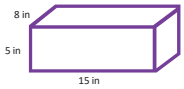
Area = 42 sq in

Area = 128 sq ft

Find the volume of each solid.



Volume = 64 cubic cm



Volume = 600 cubic in

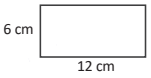
Additional Practice

In the box on the left, write the formula used for finding the area of a rectangle. In the box on the right, write the formula used for finding the area of a triangle. Refer to Lessons 36 and 56 if necessary.

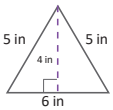
Area = Length × Width

Area = $\frac{\text{Base} \times \text{Height}}{2}$

Find the perimeter and area of each shape.



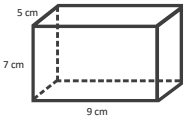
Perimeter = 36 cm
Area = 72 sq cm



Perimeter = 16 in
Area = 12 sq in

In the circle, write the formula used for finding the volume of a rectangular prism, and then find the volume of the solid.

Volume = Length × Width × Height



Volume = 315 cubic cm

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