



 Amplify Desmos Math **CALIFORNIA**

Grade 5

**Intervention, Extension, and
Investigation Resources**

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Mini-Lessons

Unit 1

Mini-Lessons

Comparing Volume

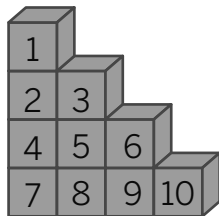
ML 1.02



Modeled Review


Name: Shawn

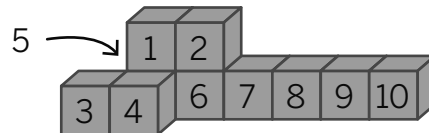
Find the volume of the figure.


number of cubes used: 10

volume: 10 unit cubes

Name: Clare

Find the volume of the figure.


number of cubes used: 10

volume: 10 unit cubes


Guided Practice



Complete the table. Circle the figure with the greater volume. Use unit cubes if it is helpful.

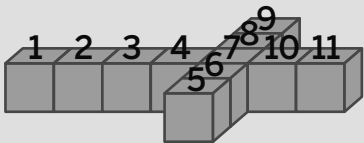
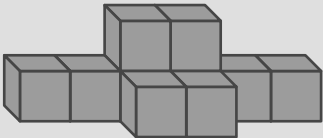
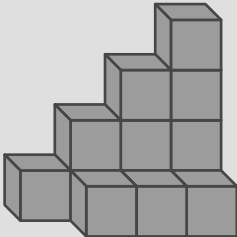
Figure	Number of cubes used	Volume
	9	9 _____
	6	



Guided Practice



Complete the table. Circle the figure with the greatest volume. Use unit cubes if it is helpful.

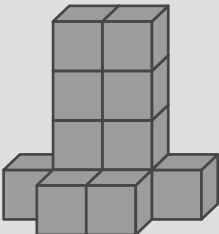
Figure	Number of cubes used	Volume
		
		
		



Check



Complete the table. Use unit cubes if it is helpful.

Figure	Number of cubes used	Volume
		

Building and Describing Rectangular Prisms

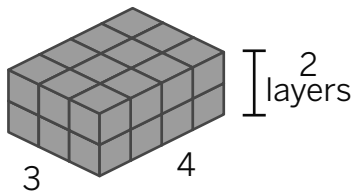
ML 1.03.A



Modeled Review

Name: Han

Build a rectangular prism using unit cubes. Then describe your rectangular prism.



One layer is 3×4 or 12 cubes.

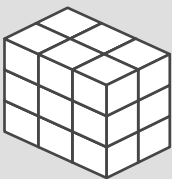
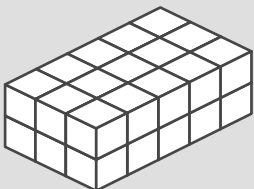
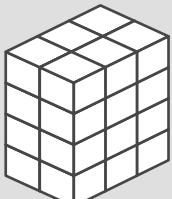
There are 2 layers of 12 cubes.



Guided Practice



1. Complete the table. Use unit cubes if it is helpful.

Prism	Number of cubes in 1 layer	Number of layers
	$2 \times 3 = 6$	
	$3 \times 5 = 15$	
		

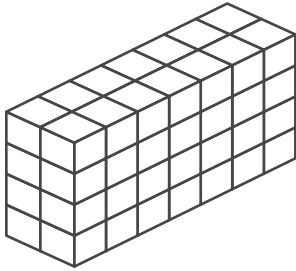


Guided Practice



For Problems 2–3, describe the rectangular prism. Use unit cubes if it is helpful.

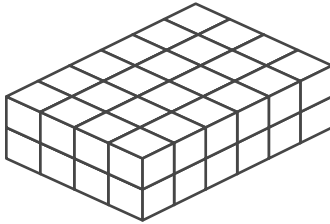
2.



One layer is _____ \times _____ or _____ cubes.

There are _____ layers of _____ cubes.

3.

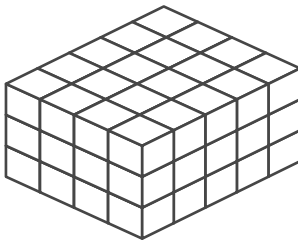




Check



Describe the rectangular prism. Use unit cubes if it is helpful.



Building Different Rectangular Prisms With a Given Volume

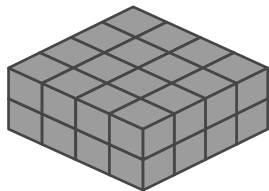
ML 1.03.B



Modeled Review

Name: Jada

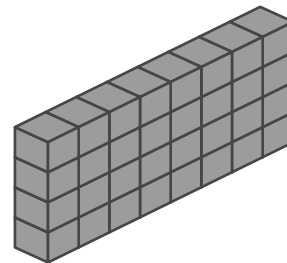
Use 32 unit cubes to build a rectangular prism. What could the prism look like?



One layer is 4×4 or 16 cubes. So, there are 2 layers of 16 cubes each.

Name: Clare

Use 32 unit cubes to build a rectangular prism. What could the prism look like?



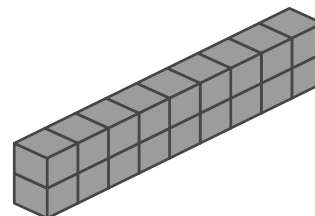
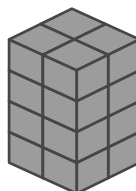
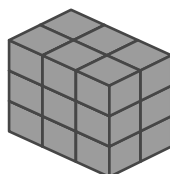
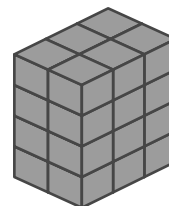
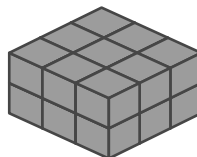
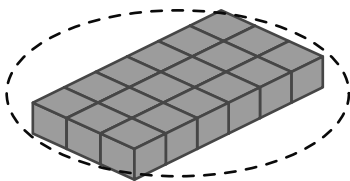
One layer is 1×8 or 8 cubes. So, there are 4 layers of 8 cubes each.



Guided Practice



1. Priya used 18 sugar cubes to build a rectangular prism. What could the prism look like? Select *all* the prisms with 18 cubes.



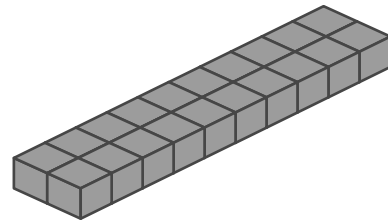
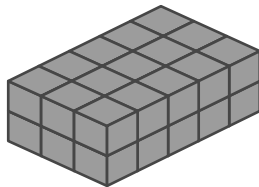
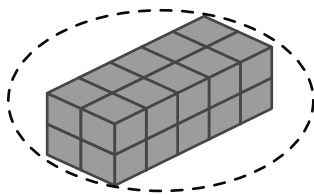


Guided Practice

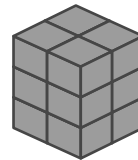
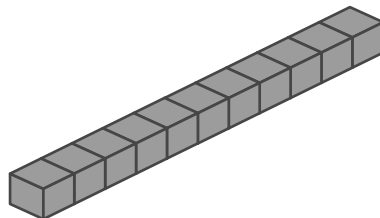
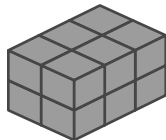


For Problems 2–3, circle the prism(s) that have the given number of unit cubes.

2. 20 unit cubes



3. 11 unit cubes



4. Priya used 30 unit cubes to build a rectangular prism. What could the prism look like? Select *two* that apply. Use unit cubes if it is helpful.

- A. There are 3 layers. Each layer is 3×4 unit cubes.
- B. There are 15 unit cubes in 1 layer. There are 2 identical layers.
- C. There are 3 identical layers. In each layer, there are 5×2 unit cubes.
- D. There are 10 unit cubes in 1 layer. There are 4 layers.



Check



Shawn used 24 unit cubes to build a rectangular prism. What could the prism look like? Select *three* that apply. Use unit cubes if it is helpful.

- A. There are 12 unit cubes in 1 layer. There are 2 identical layers.
- B. There are 3 layers. Each layer is 2×3 unit cubes.
- C. There are 3 identical layers. In each layer, there are 2×4 unit cubes.
- D. There are 4 layers of 3×2 unit cubes each.

Using the Structure of Rectangular Prisms to Determine Volume

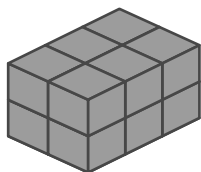
ML 1.04



Modeled Review

Name: Gabriela

Determine the volume of the prism. Show or explain your thinking.



The bottom layer has 6 cubes.
There are 2 layers. 2 layers of
6 cubes is 12 cubes.

answer: 12 cubic units



Guided Practice



1. Complete the table.

Prism	Number of cubes in the bottom layer	Number of layers	Volume (cubic units)
	4	3	
	8		

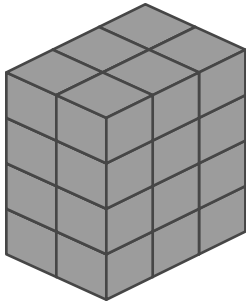


Guided Practice



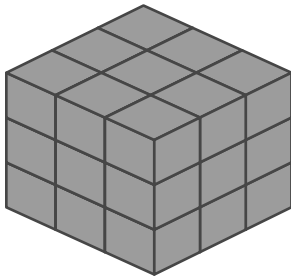
Determine the volume of each prism. Show or explain your thinking.

2.



answer: _____

3.



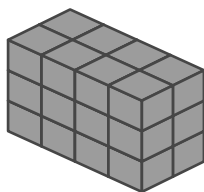
answer: _____



Check



Determine the volume of the prism. Show or explain your thinking.



answer: _____

Finding the Volume of Partially Packed Rectangular Prisms

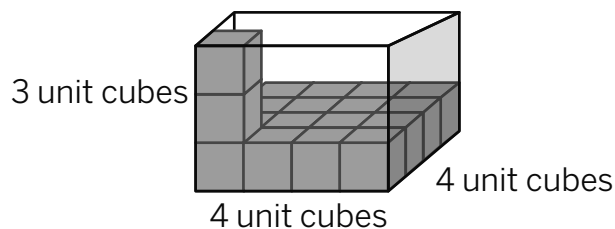
ML 1.05.A



Modeled Review

Name: Diego

Determine the volume of the rectangular prism. Show or explain your thinking.



The bottom layer has 4×4 , or 16, unit cubes. The prism has 3 layers of 16, so the volume is 48 unit cubes because $3 \times 16 = 48$.



Guided Practice



1. Complete the table. Use unit cubes if it is helpful.

Prism	Number of cubes in bottom layer	Number of layers	Volume
	$4 \times 3 = 12$		_____ unit cubes

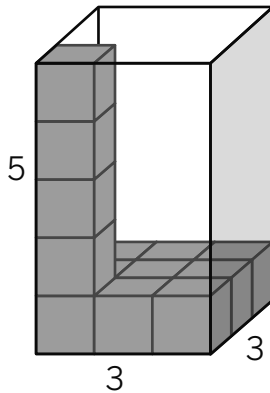


Guided Practice



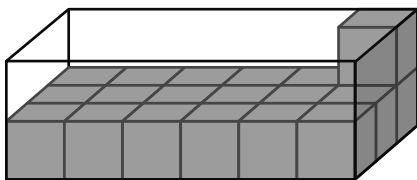
Determine the volume of each rectangular prism. Show or explain your thinking.

2.



answer: _____

3.



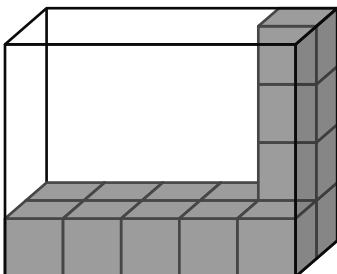
answer: _____



Check



Determine the volume of the rectangular prism. Show or explain your thinking.



answer: _____

Writing Volume Expressions

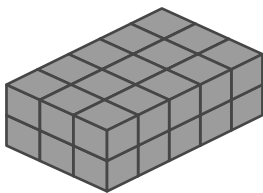
ML 1.05.B



Modeled Review

Name: Jada

Write two multiplication expressions to represent the volume of the rectangular prism.



15 cubes in a layer
with 2 layers
 15×2

3 cubes by 5 cubes in a
layer with 2 layers
 $3 \times 5 \times 2$

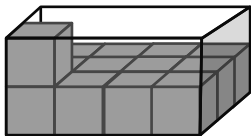


Guided Practice



For each prism, circle two expressions that represent the volume of the figure.

1.

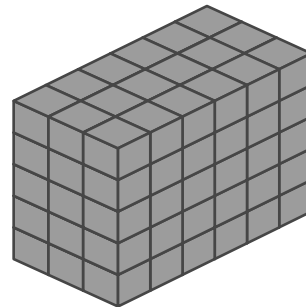


$$12 \times 2$$

$$4 \times 2 \times 2$$

$$4 \times 3 \times 2$$

2.



$$3 \times 6 \times 5$$

$$18 \times 5$$

$$15 \times 5$$

Determining the Volume of Solid Rectangular Prisms

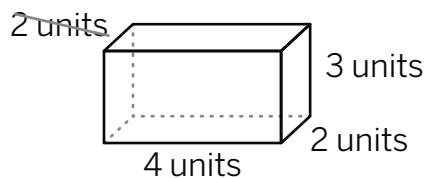
ML 1.06



Modeled Review

Name: Han

Determine the volume of the prism in cubic units.



$$V = \text{length} \times \text{width} \times \text{height}$$

$$V = l \times w \times h$$

$$V = 4 \times 2 \times 3$$

answer: 24 cubic units

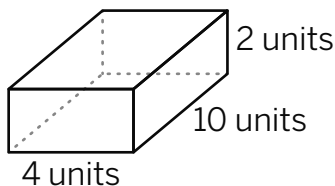


Guided Practice

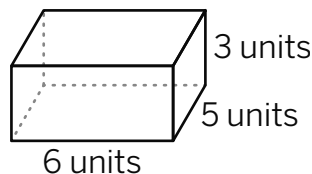


1. Use the prisms to complete the table.

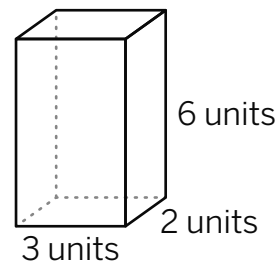
Prism A



Prism B



Prism C



	length \times width \times height	volume (cubic units) $V = l \times w \times h$
Prism A	<u>4</u> \times <u>10</u> \times <u>2</u>	80 cubic units
Prism B	<u>6</u> \times ____ \times ____	
Prism C	____ \times ____ \times ____	

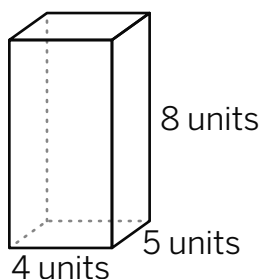


Guided Practice



Determine the volume of each prism. Show or explain your thinking.

2.



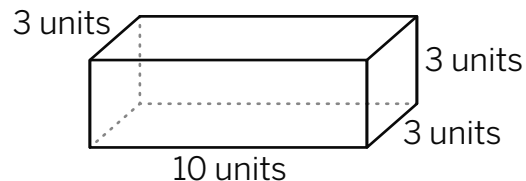
$$V = l \times w \times h$$

$$V = 4 \times 5 \times 8$$

$$V = \underline{\hspace{2cm}}$$

answer: cubic units

3.



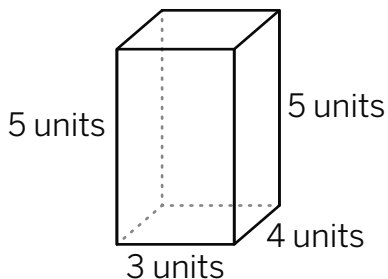
$$V = l \times w \times h$$

$$V = \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}}$$

$$V = \underline{\hspace{2cm}}$$

answer:

4.



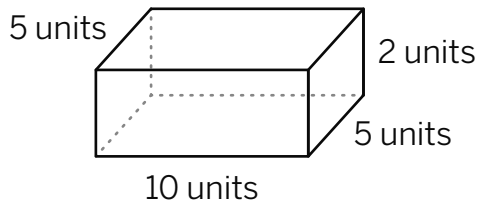
answer:



Check



Determine the volume of the prism. Show or explain your thinking.



answer:

Measuring Volume With Different Units

ML 1.07



Modeled Review

Name: Clare

- Draw lines to match the object with the most appropriate unit of measure for its volume.

A. Refrigerator	X	Cubic centimeters
B. Deck of cards	X	Cubic inches
C. Alarm clock	X	Cubic feet
- Choose one of the above objects. Why did you select the unit of measure that you did?

I would use cubic feet to measure the volume of a refrigerator because the side lengths of a refrigerator are much longer than an inch or centimeter.



Guided Practice



- Determine the most appropriate unit of measure for the volume of each object. Place a check mark in the correct column.

	Cubic centimeters	Cubic inches	Cubic feet
fish tank		✓	
ice cube			
bathtub			
cereal box			
pink eraser			
freezer			



Guided Practice



2. Choose an object from the table in Problem 1. Why did you select the unit of measure that you did?

3. Which unit of measure would you use to measure the volume of a swimming pool? Explain your thinking.

A. cubic centimeters **B.** cubic inches **C.** cubic feet



Check



Which unit of measure would you use to measure the volume of a lunch box? Explain your thinking.

A. cubic centimeters **B.** cubic inches **C.** cubic feet

Using Volume Formulas

ML 1.08



Modeled Review

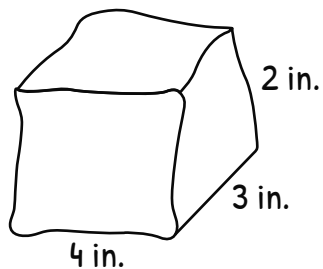
Name: Diego

1. Determine the volume of a storage container that measures 4 inches by 3 inches by 2 inches.

$$V = l \times w \times h$$

$$V = 4 \times 3 \times 2$$

$$V = 24$$

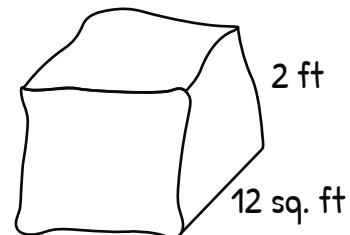
answer: 24 cubic inches

2. Determine the volume of a storage container with a base that measures 12 square feet and a height that measures 2 feet.

$$V = B \times h$$

$$V = 12 \times 2$$

$$V = 24$$

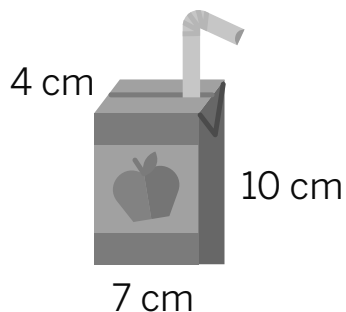
answer: 24 cubic feet

Guided Practice



Determine the volume of the object.

1.



$$V = l \times w \times h$$

$$V = 7 \times 4 \times \underline{\hspace{2cm}}$$

$$V = \underline{\hspace{2cm}} \text{ cubic centimeter}$$

2.



$$V = B \times h$$

$$V = 4 \times \underline{\hspace{2cm}}$$

$$V = \underline{\hspace{2cm}} \text{ cubic } \underline{\hspace{2cm}}$$

Decomposing Figures Into Rectangular Prisms

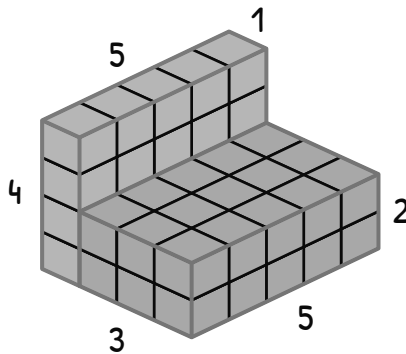
ML 1.09



Modeled Review

Name: Shawn

Show how you would decompose the figure into prisms. Label the dimensions of the prisms.

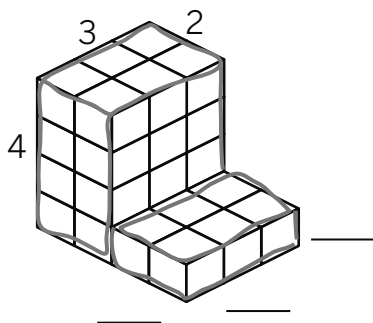


Guided Practice

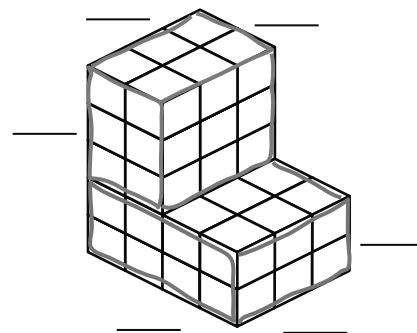


Two rectangular prisms were put together to make one figure. Label the dimensions of each prism. Use unit cubes if it is helpful.

1.



2.



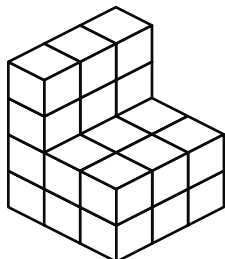


Guided Practice

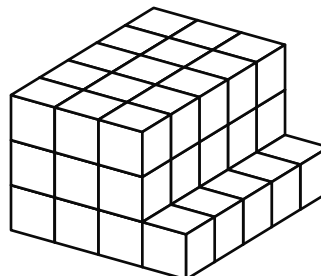


Draw lines to decompose the figure into prisms. Then label the dimensions of each prism. Use unit cubes if it is helpful.

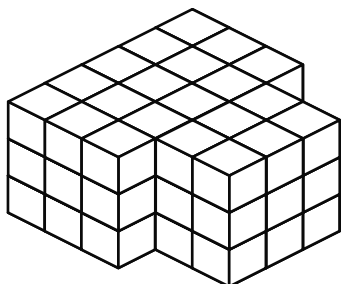
3.



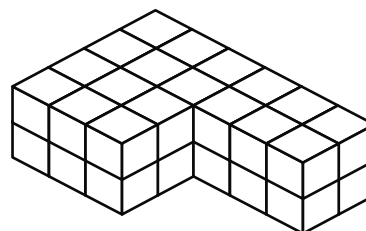
4.



5.



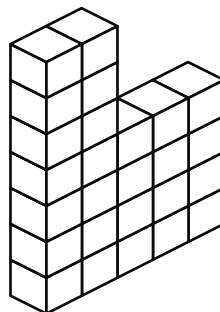
6.



Check



Draw lines to decompose the figure into prisms. Then label the dimensions of each prism.



Determining the Volumes of Figures Made of Prisms

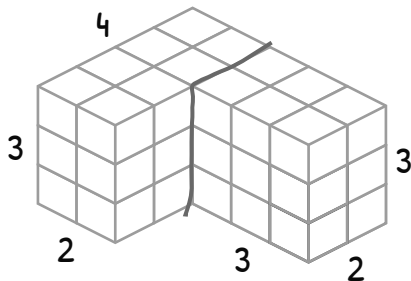
ML 1.10



Modeled Review

Name: Priya

Determine the volume of the figure. Show or explain your thinking.



$$2 \times 4 \times 3 = 24$$

$$2 \times 3 \times 3 = 18$$

$$24 + 18 = 42$$

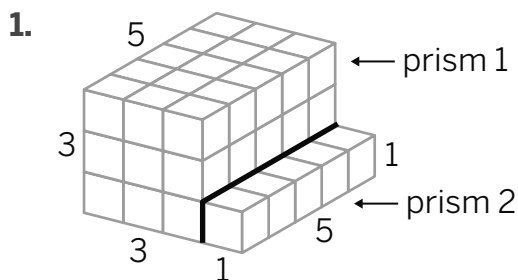
answer: 42 cubic units



Guided Practice



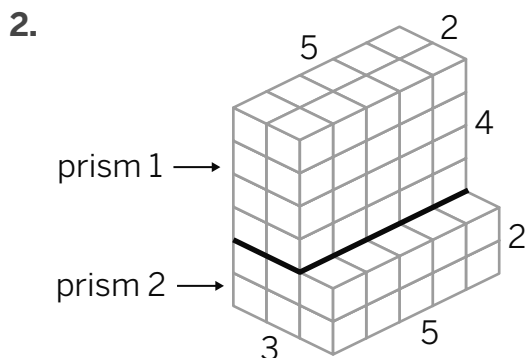
Determine the volume of each figure. Show your thinking.



prism 1: $3 \times 5 \times 3 = 45$

prism 2: $1 \times 5 \times 1 = 5$

volume: $45 + 5 = \underline{\hspace{2cm}}$ cubic units



prism 1: $5 \times 2 \times 4 = 40$

prism 2: $\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

volume: $40 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$ cubic units

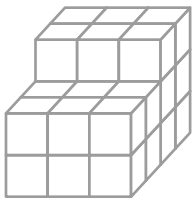


Guided Practice



Draw lines to show how you would decompose the figure. Then determine the volume. Show your thinking.

3.

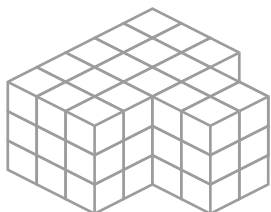


prism 1: $\underline{\quad} \times \underline{\quad} \times \underline{\quad} = \underline{\quad}$

prism 2: $\underline{\quad} \times \underline{\quad} \times \underline{\quad} = \underline{\quad}$

volume: $\underline{\quad} + \underline{\quad} = \underline{\quad}$ cubic units

4.

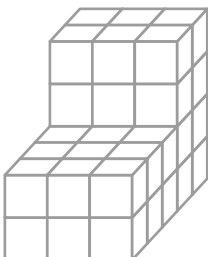


prism 1: $\underline{\hspace{2cm}}$

prism 2: $\underline{\hspace{2cm}}$

volume: $\underline{\hspace{2cm}}$

5.



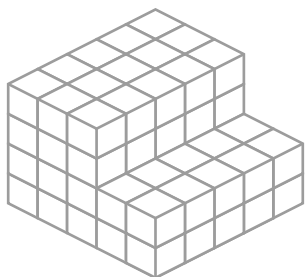
answer: $\underline{\hspace{2cm}}$



Check



Determine the volume of the figure. Show or explain your thinking.



answer: $\underline{\hspace{2cm}}$

Writing Expressions to Represent the Volume of a Figure

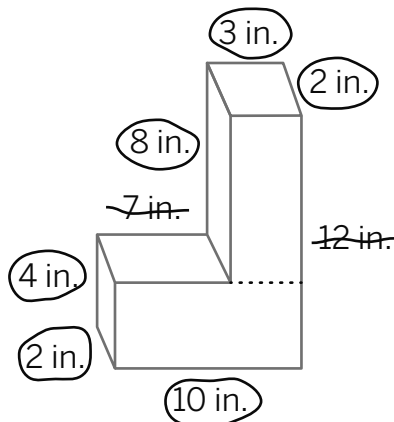
ML 1.11



Modeled Review


Name: Jada

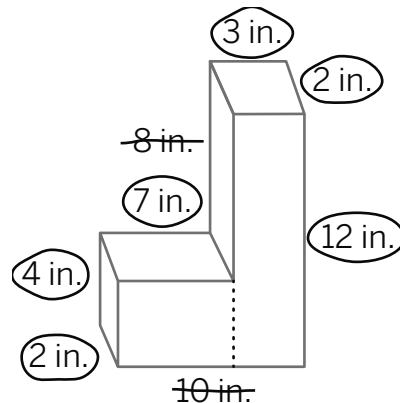
Write an expression that represents the volume of the figure.



$$(3 \times 2 \times 8) + (10 \times 2 \times 4)$$

Name: Clare

Write an expression that represents the volume of the figure.



$$(3 \times 2 \times 12) + (2 \times 7 \times 4)$$

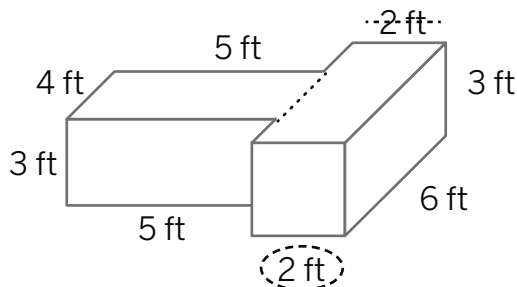


Guided Practice

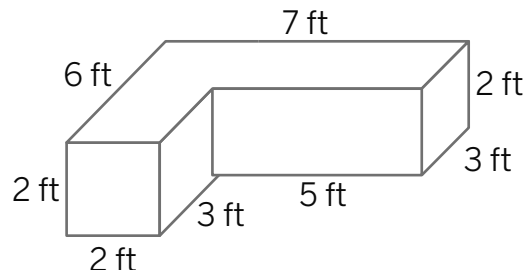


How does each expression represent the volume of the figure? Show or explain your thinking.

1. $(5 \times 4 \times 3) + (6 \times 2 \times 3)$



2. $(6 \times 2 \times 2) + (5 \times 3 \times 2)$



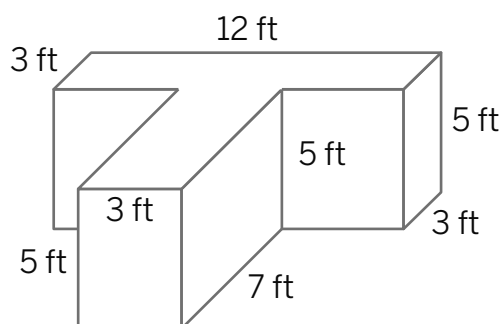


Guided Practice



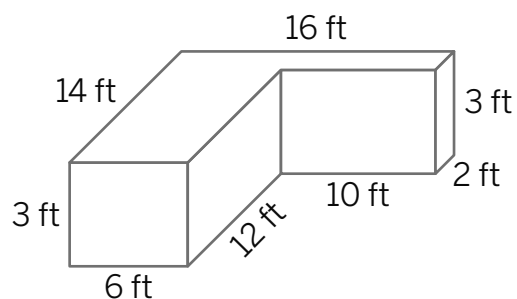
Write an expression that represents the volume of the figure.

3.



$$(\underline{\quad} \times \underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad} \times \underline{\quad})$$

4.

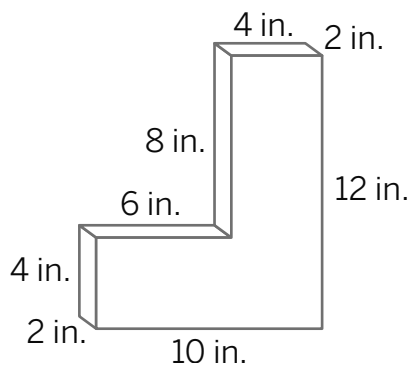




Check



Write an expression that represents the volume of the figure.



Determining Unknown Edge Lengths of a Figure

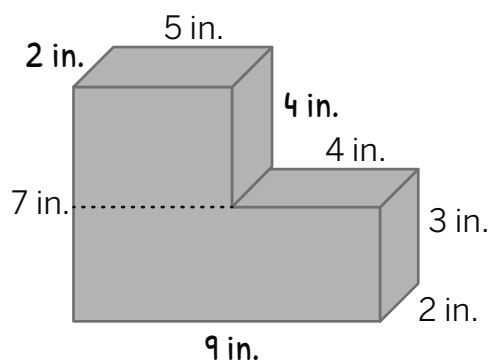
ML 1.12



Modeled Review

Name: Priya

Show how you would split the figure into two prisms. Then determine the unknown edge lengths.

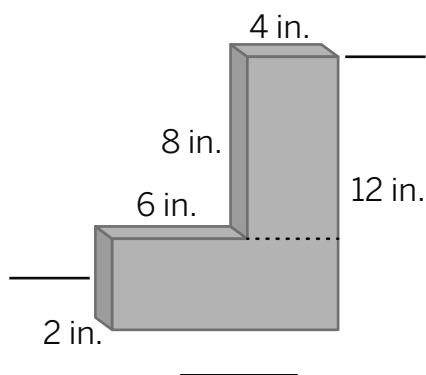


Guided Practice

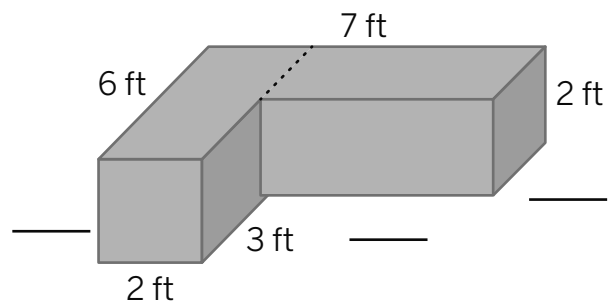


A dotted line shows how the figure could be split into two prisms. Determine the unknown edge lengths.

1.



2.



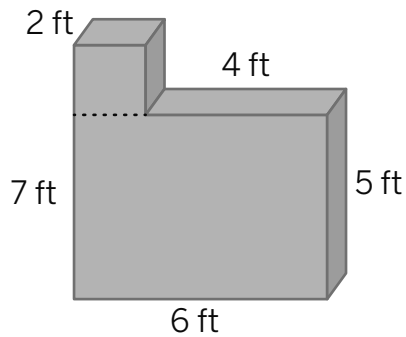


Guided Practice

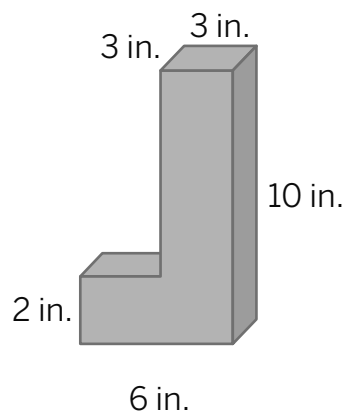


Show how you could split the figure into two prisms. Then determine the unknown edge lengths.

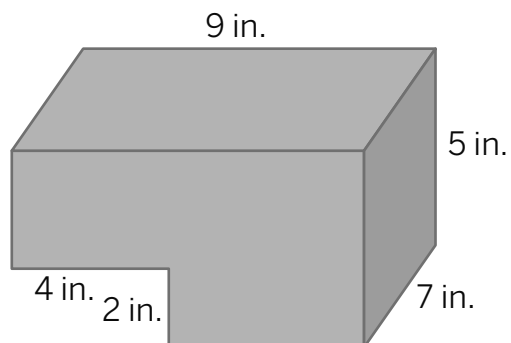
3.



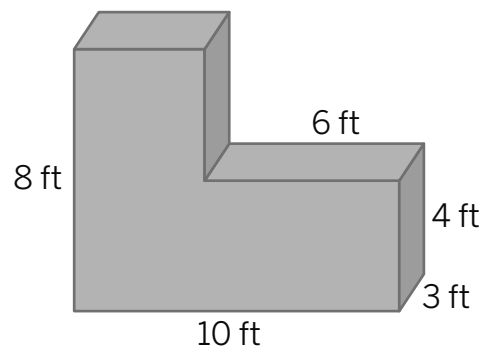
4.



5.



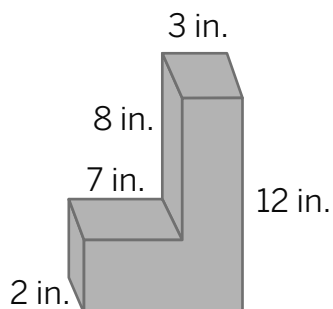
6.



Check



Show how you could split the figure into two prisms. Then determine the unknown edge lengths.



Writing Expressions to Determine the Volume of a Figure

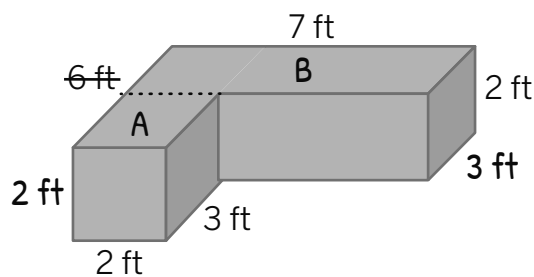
ML 1.13



Modeled Review

Name: Han

Write an expression to represent the volume of the figure. Then determine the volume. Show or explain your thinking.



$$\text{Prism A: } (2 \times 3 \times 2)$$

$$\text{Prism B: } (7 \times 3 \times 2)$$

$$\text{expression: } (2 \times 3 \times 2) + (7 \times 3 \times 2)$$

$$\text{volume: } 54 \text{ cubic feet}$$

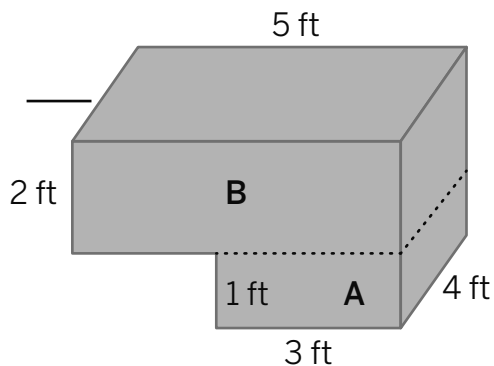


Guided Practice



Complete the expression that represents the volume of the figure. Then determine the volume. Show or explain your thinking.

1.



$$\text{Prism A: } (3 \times 4 \times 1)$$

$$\text{Prism B: } (5 \times \underline{\hspace{2cm}} \times 2)$$

$$\text{expression: } (3 \times 4 \times 1) + (5 \times \underline{\hspace{2cm}} \times 2)$$

$$\text{volume: } \underline{\hspace{2cm}} \text{ cubic feet}$$

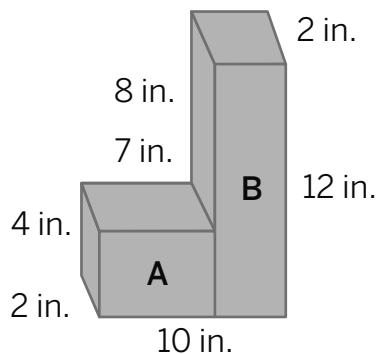


Guided Practice



Write an expression that represents the volume of the figure. Then determine the volume. Show or explain your thinking.

2.



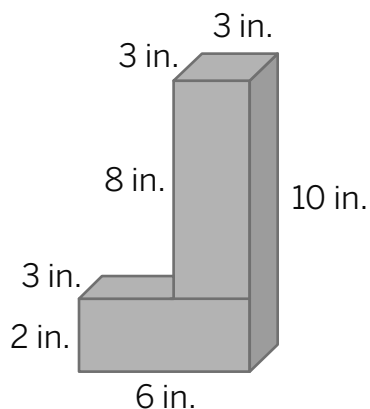
Prism A: (____ × ____ × ____)

Prism B: (____ × ____ × ____)

expression: _____

volume: ____ cubic inches

3.



expression: _____

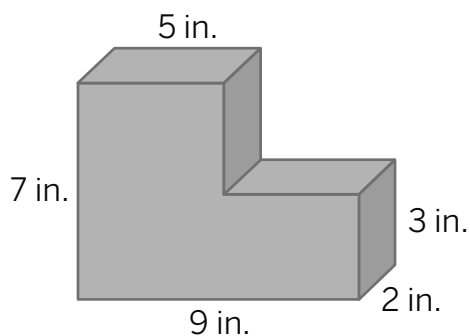
volume: _____



Check



Write an expression that represents the volume of the figure. Then determine the volume. Show or explain your thinking.



expression: _____

volume: _____

Using Clues to Determine the Volumes of Figures

ML 1.14



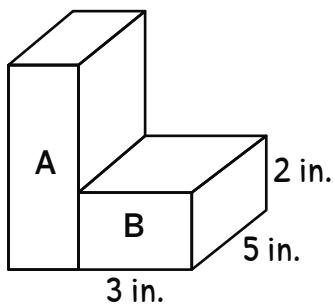
Modeled Review

Name: Clare

Use the clues to determine the volume of the figure. Show or explain your thinking.

Clues

- Prism B has a length of 3 inches, a width of 5 inches, and a height of 2 inches.
- The volume of Prism A is 2 times the volume of Prism B.



$$\text{Prism B: } 3 \times 5 \times 2 = 30$$

$$\text{Prism A: } 2 \times 30 = 60$$

$$\text{total volume: } 30 + 60 = 90$$

answer: 90 cubic inches



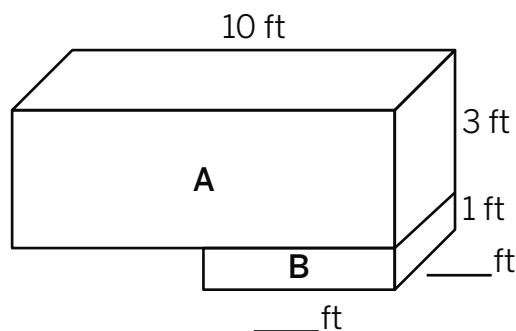
Guided Practice



1. Use the clues to complete the dimensions of Prism A and Prism B.

Clues

- The length of Prism A is twice the length of Prism B.
- The height of Prism A is half the width of Prism B.





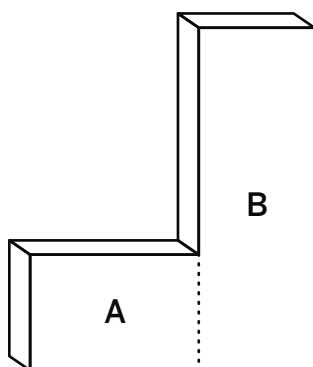
Guided Practice



2. Use the clues to determine the volume of the figure. Show or explain your thinking.

Clues

- Prism B has a length of 3 inches, a width of 2 inches, and a height of 9 inches.
- Prism A has a height of 3 inches.
- The width of each prism is the same.
- The length of Prism A and B is 8 inches combined.



answer: _____



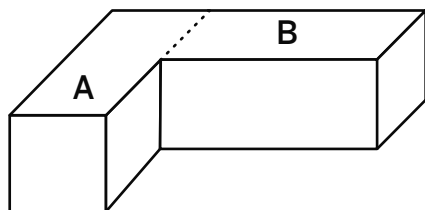
Check



- Use the clues to determine the volume of the figure. Show or explain your thinking.

Clues

- Prism A has a length of 6 inches, a width of 2 inches, and height of 2 inches.
- The volume of each prism is the same.



answer: _____

Unit 2

Mini-Lessons

Representing Equal-Sharing Using Diagrams and Division Expressions

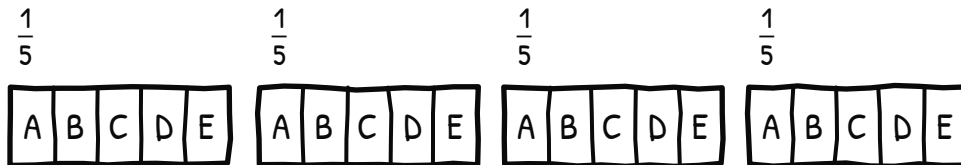
ML 2.02



Modeled Review

Name: Santiago

1. 4 sandwiches are equally shared by 5 students. How many sandwiches does each student receive? Draw a diagram to represent your thinking.



answer: $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \frac{4}{5}$ of a sandwich

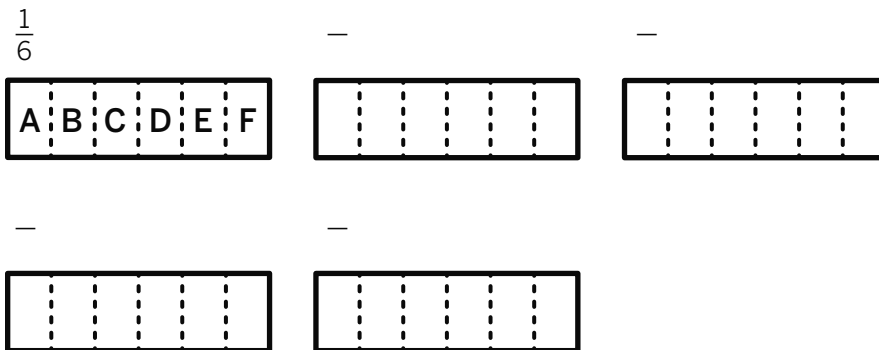
2. Write a division expression to represent the story problem. $4 \div 5$



Guided Practice



1. 5 granola bars are equally shared among 6 students. How many granola bars does each student receive? Label each diagram to represent your thinking.



answer: _____

2. Write a division expression to represent the story problem.

_____ granola bars \div _____ students expression: _____



Guided Practice



Solve each problem. Draw a diagram and write an expression to represent your thinking.

3. 2 granola bars are shared equally among 3 friends. How many granola bars does each friend receive?

answer: _____

expression: _____

4. 3 granola bars are shared equally among 4 friends. How many granola bars does each friend receive?

answer: _____

expression: _____



Check



The teacher has 3 granola bars to share equally among 5 students. How many granola bars does each student receive? Draw a diagram and write an expression to represent your thinking.

answer: _____

expression: _____

Writing Division Equations to Represent Equal-Sharing Situations

ML 2.03



Modeled Review

Name: Avery

5 people are seated at a table with 3 subs to share equally. Write a division equation to represent how much of a sub each person will receive.



$$3 \div 5 = \frac{3}{5}$$

← how much each person receives

subs being shared number of equal shares



Guided Practice



1. Party guests equally share subs at their tables. Complete the table to determine how much of a sub each guest will receive.

Number of subs	Number of people sharing	Division expression	Amount of a sub each person gets
1	2	$1 \div 2$	
1	3		$\frac{1}{3}$
1	4		
1	5		



Guided Practice



2. Party guests equally share subs at their tables. Complete the table to determine how much of a sub each guest will receive.

Number of subs	Number of people sharing	Division equation
3	5	$3 \div 5 = \frac{3}{5}$
4	3	
6	8	

3. There are 8 people seated at a table with 5 subs to share equally. Write a division equation to represent how much of a sub each person will receive.



equation: _____

How much of a sub will each person receive? _____



Check



- 7 people are seated at a table with 4 subs to share equally. Write a division equation to represent how much of a sub each person will receive.



equation: _____

How much of a sub will each person receive? _____

Solving Division Story Problems

ML 2.04



Modeled Review



Write an equation and solve.

Priya had 3 feet of fabric to make 5 scarves. How many yards of fabric can she use in each scarf?

$$\begin{array}{c}
 3 \div 5 = \frac{3}{5} \\
 \swarrow \quad \searrow \\
 \text{amount} \quad \text{number} \\
 \text{being} \quad \text{of equal} \\
 \text{shared} \quad \text{shares}
 \end{array}
 \left. \vphantom{\begin{array}{c} 3 \div 5 = \frac{3}{5} \\ \swarrow \quad \searrow \\ \text{amount} \quad \text{number} \\ \text{being} \quad \text{of equal} \\ \text{shared} \quad \text{shares} \end{array}} \right\} \begin{array}{l} \text{amount each person} \\ \text{receives (size of 1 group)} \end{array}$$



Guided Practice



1. Fill in the blank to match the equation to the situation.

Equation		Situation
A. $7 \div 10 = \frac{7}{10}$	<u> C </u>	Grandma made 4 loaves of blueberry bread and shared 6 cups of blueberries equally among the loaves. How many blueberries were in each loaf?
B. $10 \div 7 = \frac{10}{7}$	<u> </u>	The pet store had 10 fish tanks and 7 cups of fish food to share equally among the fish tanks. How much fish food can be put in each tank?
C. $6 \div 4 = \frac{6}{4}$	<u> </u>	6 dogs share 4 cups of food equally. How much food does each dog get?
D. $4 \div 6 = \frac{4}{6}$	<u> </u>	7 students shared 10 glasses of lemonade equally. Each student received more than 1 cup of lemonade. How much lemonade did each student receive?



Guided Practice



Write an equation to represent each situation and solve.

Situation	Number of people sharing
2 granola bars shared equally by 3 friends. How much of a granola bar will each friend receive?	
3 granola bars shared equally among 5 friends. How much of a granola bar will each friend receive?	
4 granola bars shared equally among 3 friends. How much of a granola bar will each friend receive?	



Check



Write an equation and solve.

There are 4 granola bars to share equally among 5 friends. How much of a granola bar will each friend receive?

equation: _____

Explaining the Relationship Between Fractions and Division

ML 2.05



Modeled Review



Consider the equation $a \div b = \frac{a}{b}$.

The fraction $\frac{a}{b}$ will be *less* than 1 if the dividend is less than the divisor.

$$4 \div 5 = \frac{4}{5}$$

The fraction $\frac{a}{b}$ will be *greater* than 1 if the dividend is greater than the divisor.

$$5 \div 4 = \frac{5}{4} \text{ or } 1\frac{1}{4}$$

The fraction $\frac{a}{b}$ will be *equal to a whole number* if the dividend is a multiple of the divisor.

$$15 \div 5 = \frac{15}{5} \text{ or } 3$$



Guided Practice



1. Circle the equations that are true.

$$b \div 5 = \frac{b}{5}$$

$$3 \div a = \frac{a}{3}$$

$$6 \div a = \frac{6}{a}$$

$$7 \div 3 = \frac{3}{7}$$

$$4 \div 2 = \frac{4}{2}$$

$$8 \div 5 = \frac{8}{5}$$

Complete the equations.

2. $a \div 3 = \frac{a}{\quad}$

3. $9 \div 2 = \frac{\quad}{\quad}$

4. $5 \div a = \frac{\quad}{\quad}$

5. $8 \div 6 = \frac{\quad}{\quad}$

6. $b \div 4 = \frac{\quad}{\quad}$

7. $2 \div 4 = \frac{\quad}{\quad}$



Guided Practice



8. Complete the table by rewriting the equation $a \div b = \frac{a}{b}$ using the values in each row.

a	b	Equation
3	5	$3 \div 5 = \frac{3}{5}$
8	2	
3	4	

9. Are all of your equations true? How do you know?



Check



Determine whether the equation $4 \div a = \frac{4}{a}$ is *true* or *false*. Explain your thinking.

Writing Multiplication and Division Expressions for Equal-Sharing Story Problems

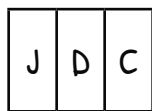
ML 2.06



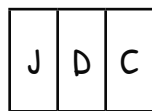
Modeled Review

Name: Dylan

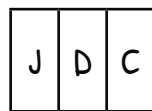
Jada, Diego, and Clare are planting 4 garden beds. They each planted the same amount. How many garden beds did each person plant? Show or explain your thinking.



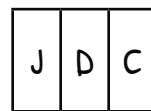
$$\frac{1}{3}$$



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



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



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

4 garden beds
divided into 3 parts

$$4 \div 3 = \frac{4}{3}$$

answer: $\frac{4}{3}$ garden beds

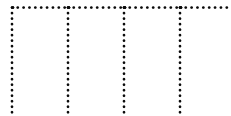
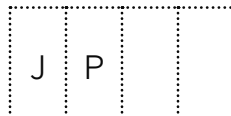
$\frac{1}{3}$ of 4 garden beds
 $\frac{1}{3} \times 4 = \frac{4}{3}$



Guided Practice



- Jada, Priya, Shawn, and Kai planted 2 garden beds with watermelons. They each planted the same amount. How many garden beds did each person plant? Show or explain your thinking.



answer: _____

- Complete the expressions to represent the story problem.

$$2 \div \underline{\hspace{2cm}}$$

$$\frac{1}{4} \times \underline{\hspace{2cm}}$$



Guided Practice



Solve each story problem and write an expression to represent it. Show or explain your thinking.

3. Jack, Clare, and Diego planted 2 garden beds. They each planted the same amount. How many garden beds did each person plant?



expression: _____

answer: _____

4. Han, Tristan, Maya, and Eva planted 3 flower beds. They each planted the same amount. How many flower beds did each person plant?

expression: _____

answer: _____

5. Jack and Diego planted 4 flower beds. They each planted the same amount. How many flower beds did each person plant?

expression: _____

answer: _____



Check



Write an expression to represent the situation.

Tristan, Kai, and Santiago planted 5 garden beds. They each planted the same amount. How many garden beds did each person plant?

expression: _____

answer: _____

Relating Expressions to the Same Diagrams

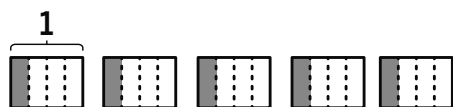
ML 2.07



Modeled Review

Name: Kai

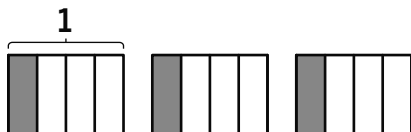
Write a multiplication and division expression to represent the diagram.

multiplication expression: $\frac{1}{4} \times 5$ division expression: $5 \div 4$ 

Guided Practice

Circle *all* the expressions that match each diagram.

1.



a. $3 \times \frac{1}{4}$

b. $\frac{1}{4} \times 3$

c. $3 \div 4$

d. $4 \div 3$

2.



a. $6 \times \frac{1}{5}$

b. $5 \div 6$

c. $6 \div 5$

d. $\frac{1}{5} \times 6$



Guided Practice



Write a multiplication and division expression to represent each diagram.



multiplication expression: $\frac{1}{4}$ _____

division expression: 2 _____



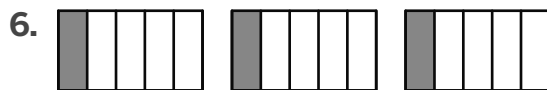
multiplication expression: _____

division expression: _____



multiplication expression: _____

division expression: _____



multiplication expression: _____

division expression: _____



Check



Write a multiplication and division expression to represent the diagram.



multiplication expression: _____

division expression: _____

Determining Products of Whole Numbers and Non-Unit Fractions**ML 2.08****Modeled Review**Name: Tristan

Determine the value of the expression.

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

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

answer: $\frac{6}{4}$

**Guided Practice**

Select the value that makes each equation true.

1. $6 \times \frac{4}{5} = 6 \times ? \times \frac{1}{5}$

A. 24

B. 5

C. 4

D. $\frac{4}{5}$

2. $4 \times \frac{2}{3} = 4 \times ? \times \frac{1}{3}$

A. $\frac{2}{3}$

B. 2

C. 8

D. 3

3. $5 \times \frac{3}{4} = 5 \times ? \times \frac{1}{4}$

A. 15

B. 20

C. $\frac{3}{4}$

D. 3

4. $2 \times \frac{5}{6} = 2 \times ? \times \frac{1}{6}$

A. $\frac{5}{6}$

B. 6

C. 10

D. 5



Guided Practice



Determine the value of each expression.

5. $5 \times \frac{2}{5}$

answer: _____

6. $2 \times \frac{3}{4}$

answer: _____

7. $4 \times \frac{2}{4}$

answer: _____

8. $6 \times \frac{3}{5}$

answer: _____

9. $3 \times \frac{4}{5}$

answer: _____

10. $8 \times \frac{3}{4}$

answer: _____



Check



Determine the value of the expression.

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

answer: _____

Determining the Area of Rectangles With a Unit-Fraction Side Length

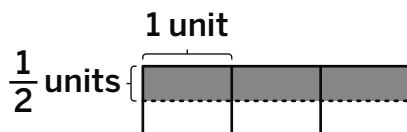
ML 2.09



Modeled Review

Name: Jack

Determine the area of the shaded rectangular region in square units.
Show or explain your thinking.



I counted the number of $\frac{1}{2}$ units.

$$3 \times \frac{1}{2} = \frac{3}{2} \text{ or } 1\frac{1}{2} \text{ square units}$$

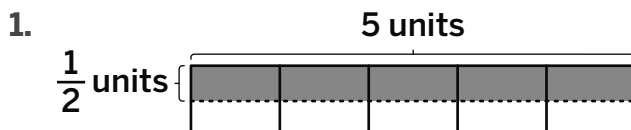
area: $1\frac{1}{2}$ square units



Guided Practice

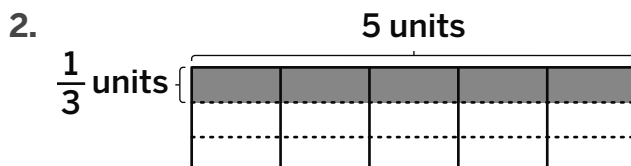


Determine the area of the shaded region of each rectangle in square units.
Show or explain your thinking.



$$5 \times \frac{1}{2} = \underline{\hspace{2cm}}$$

area: _____



area: _____

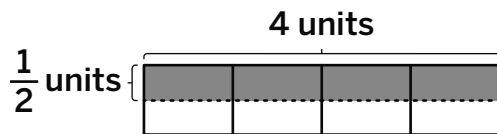


Guided Practice



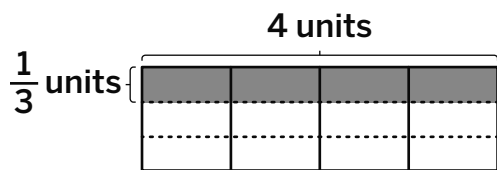
Determine the area of the shaded region of the rectangle in square units.
Show or explain your thinking.

3.



area: _____

4.



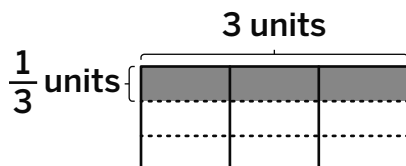
area: _____



Check



Determine the area of the shaded region of the rectangle in square units.
Show or explain your thinking.



area: _____

Determining the Area of Rectangles With a Non-Unit Fraction Side Length

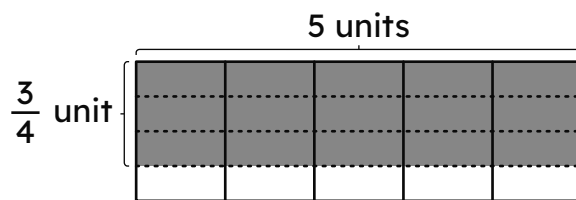
ML 2.10



Modeled Review

Name: Avery

Determine the area of the shaded region in square units. Show or explain your thinking.



area: $3\frac{3}{4}$ square units

$\frac{1}{4}$ unit in each rectangle, 3 units in each column, 5 units wide

5 units with $\frac{3}{4}$ shaded units in each.

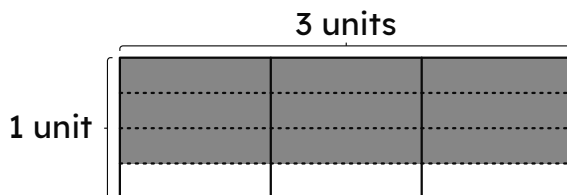


Guided Practice



Determine the area of the shaded region in square units.

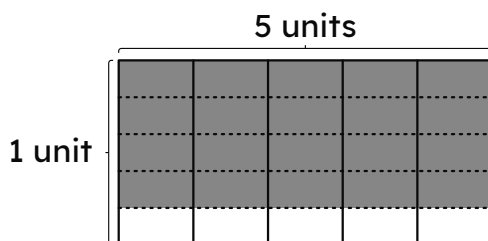
1.



3 units with $\frac{3}{4}$ unit in each

area: _____

2.



5 units with $\frac{4}{5}$ unit in each

area: _____



Guided Practice



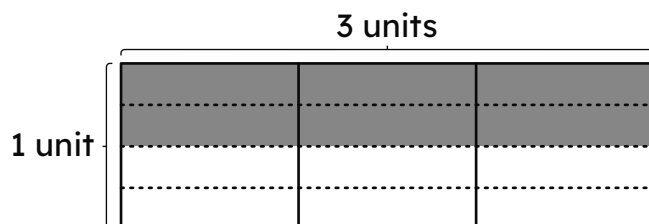
Determine the area of the shaded region in square units.

3.



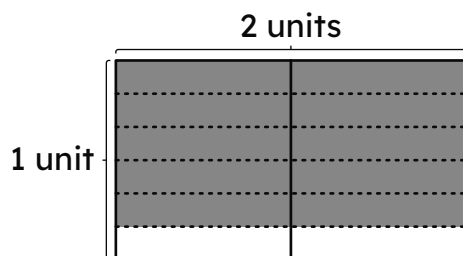
area: _____

4.



area: _____

5.



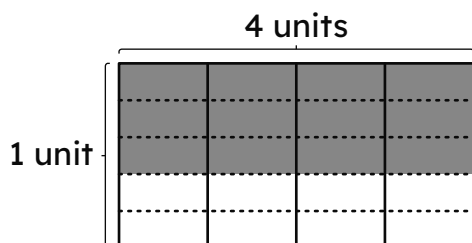
area: _____



Check



Determine the area of the shaded region in square units.



area: _____

Determining the Area of Rectangles With a Fractional Side Length Greater Than 1

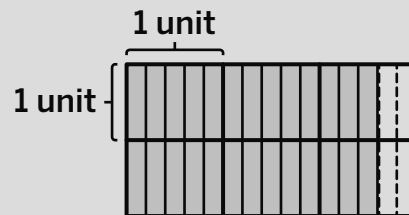
ML 2.11



Modeled Review



Write a multiplication expression that represents the area of the rectangle.
Determine the area in square units.



Clare's response:

$$2 \times 2\frac{3}{5}$$

area: $4\frac{6}{5}$ or $5\frac{1}{5}$

Eva's response:

$$2 \times \frac{13}{5}$$

area: $\frac{26}{5}$

Santiago's response:

$$2 \times 13 \times \frac{1}{5}$$

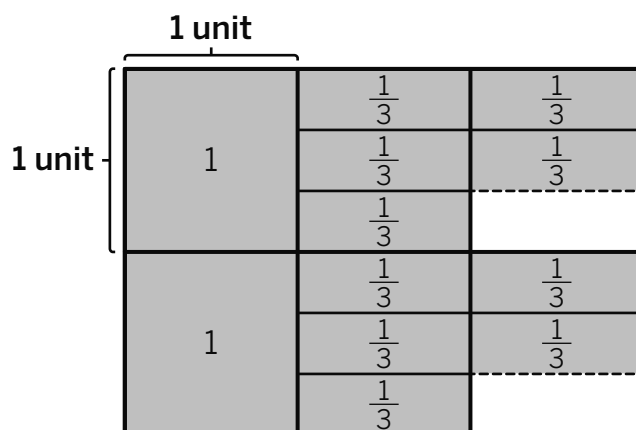
area: $\frac{26}{5}$



Guided Practice



- Circle the expressions that represent the area of the rectangle using multiplication, in square units.



expressions:

$$2 \times 2\frac{2}{3}$$

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

$$2 \times \frac{8}{3}$$

$$2 \times 8 \times \frac{1}{3}$$

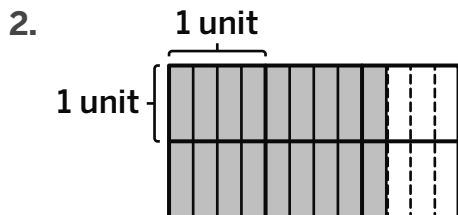
area: $5\frac{1}{3}$ square units



Guided Practice

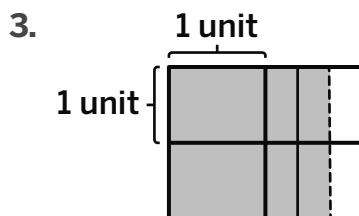


Write a multiplication expression that represents the area of the rectangle.
Determine the area in square units.



expression: _____

area: _____



expression: _____

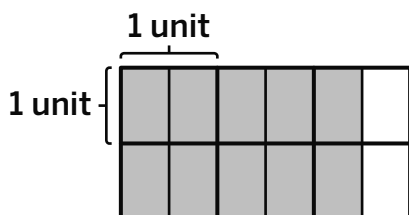
area: _____



Check



Write a multiplication expression that represents the area of the rectangle.
Determine the area in square units.



expression: _____

area: _____

Solving the Area of Rectangles With Side Lengths Greater Than 1

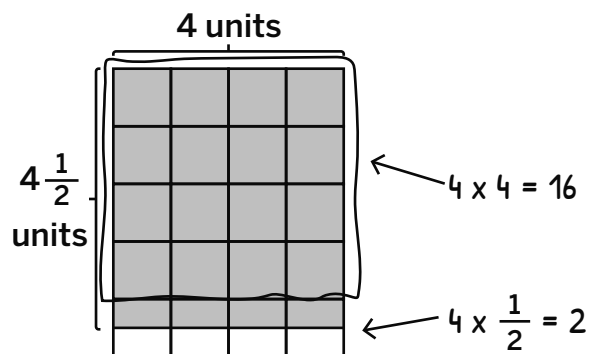
ML 2.12



Modeled Review

Name: Santiago

Determine the area of the shaded region in square units. Show or explain your thinking.



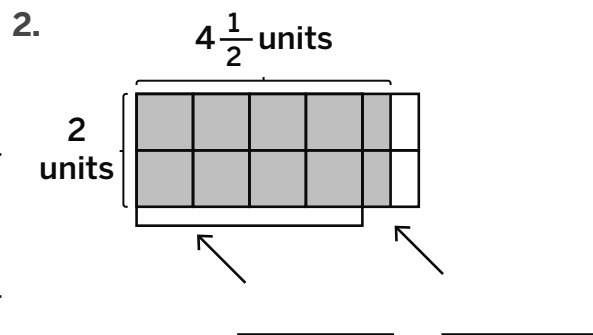
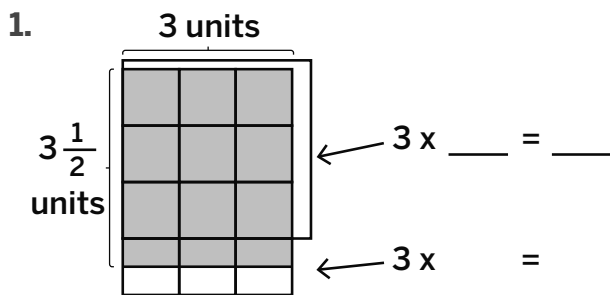
$$16 + 2 = 18$$

area: 18 square units

Guided Practice



Decompose the rectangle into whole units and fractional parts. Then determine the area of the shaded region in square units.



area: _____ square units

area: _____

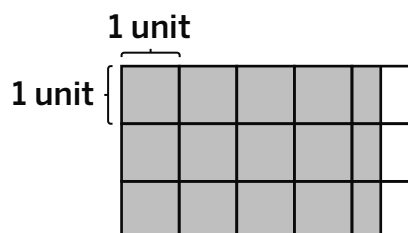


Guided Practice

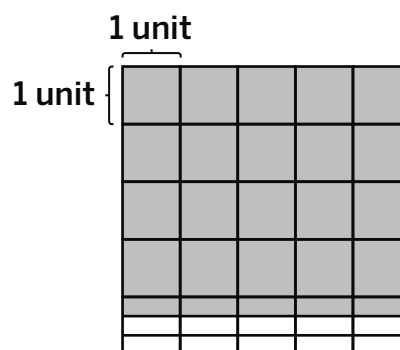


Determine the area of the shaded region, in square units. Show or explain your thinking.

3.



4.



area: _____

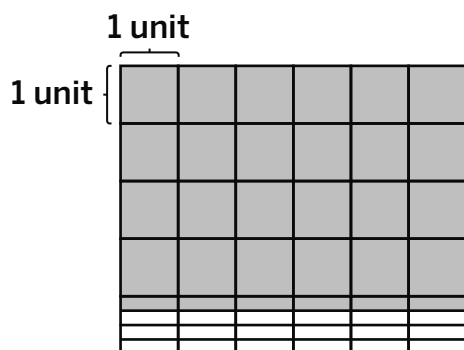
area: _____



Check



Determine the area of the shaded region, in square units. Show or explain your thinking.



area: _____

Determining the Area of Rectangles With a Mixed-Number Side Length

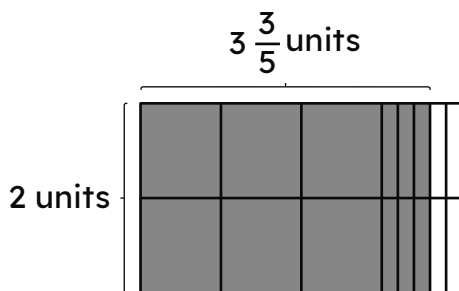
ML 2.13



Modeled Review


Name: Kai

Determine the area of the shaded garden in square units. Show or explain your thinking.



area: $7\frac{1}{5}$ square units

$$(2 \times 3) + (2 \times \frac{3}{5})$$

$$6 + 1\frac{1}{5}$$

$$= 7\frac{1}{5}$$

$$2 \times 3\frac{3}{5}$$
 can be written as

$$2 \times 3 \text{ and } 2 \times \frac{3}{5}$$



Guided Practice



- Use each diagram to complete the expression using the Distributive Property and determine the area of the shaded region in square units.

Diagram	Workspace	Area
	$3 \times 4\frac{2}{5}$ $(3 \times \underline{\quad}) + (3 \times \underline{\quad})$	<u> </u> square units
	$4 \times 5\frac{1}{4}$ $(\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$	<u> </u> square units



Guided Practice



2. Use each diagram to write an expression using the Distributive Property and determine the area of the shaded region in square units.

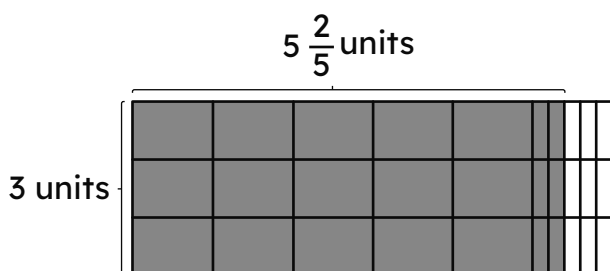
Diagram	Expression	Area
	_____	_____ square units
	_____	_____ square units



Check



Use the diagram to write an expression using the Distributive Property and determine the area of the shaded region in square units.



expression: _____

area: _____ square units

Multiplying Whole Numbers by Fractions and Mixed Numbers

ML 2.14



Modeled Review

Name: Diego

Evaluate the expressions. Explain your thinking.

1. $\frac{7}{4} \times 12$

$$\frac{(7 \times 12)}{4}$$

$$84 \div 4 = \boxed{21}$$

2. $3\frac{2}{5} \times 8$

$$(8 \times 3) + (8 \times \frac{2}{5})$$

$$24 + \frac{16}{5}$$

$$\frac{16}{5} = 3\frac{1}{5}$$

$$24 + 3\frac{1}{5} = \boxed{27\frac{1}{5}}$$



Guided Practice



Evaluate the equations.

1. $\frac{1}{4} \times 16 =$ _____

2. $\frac{5}{9} \times 3 =$ _____

3. $\frac{1}{12} \times 24 =$ _____



Guided Practice



4. Evaluate the expressions in the table.

Expression	Work	Solution
$7\frac{2}{3} \times 3$	$(3 \times 7) + (3 \times \frac{2}{3})$	
$2\frac{3}{4} \times 3$	$(3 \times \underline{\quad}) + (3 \times \underline{\quad})$	
$\frac{7}{3} \times 4$		
$6\frac{3}{4} \times 5$		
$\frac{15}{2} \times 5$		



Check



Evaluate the equations. Show your thinking.

1. $\frac{14}{3} \times 6 = \underline{\hspace{2cm}}$

2. $3\frac{4}{5} \times 5 = \underline{\hspace{2cm}}$

Estimating and Multiplying Whole Numbers and Mixed Numbers

ML 2.15



Modeled Review

Name: Jada

Estimate the product of each expression. Explain your thinking.

	Estimate
$6 \times 1\frac{6}{8}$	$1\frac{6}{8}$ is about 2. $6 \times 2 = 12$, so the product is about 12.
$5\frac{2}{10} \times 3$	$5\frac{2}{10}$ is about 5. $5 \times 3 = 15$, so the product is about 15.



Guided Practice



- Estimate the mixed fraction to the nearest whole number. Circle the whole number that matches the estimate.

8	$8\frac{3}{5}$	9
4	$4\frac{1}{3}$	5
1	$1\frac{1}{6}$	2
5	$5\frac{3}{4}$	6
3	$3\frac{2}{5}$	4



Guided Practice



2. Diego says the product of each expression in the table is about 24. For each expression, determine whether his estimate is reasonable and explain your thinking.

	Reasonable? (yes or no)	Estimate
$8 \times 2\frac{8}{10}$		
$6 \times 3\frac{1}{4}$		
$7\frac{4}{5} \times 3$		



Check



Estimate the product of each expression. Explain your thinking.

	Estimate
$5 \times 4\frac{2}{3}$	
$3\frac{3}{4} \times 2$	
$6\frac{1}{8} \times 4$	

Unit 3

Mini-Lessons

Representing Fractions of Fractions Using Diagrams

ML 3.02

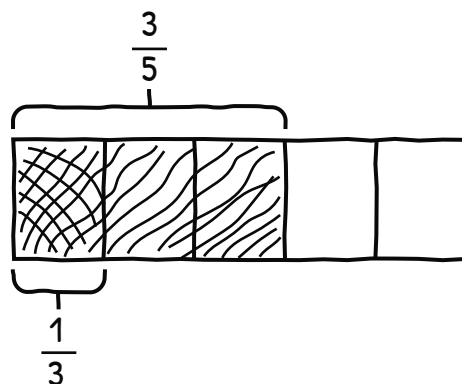


Modeled Review

Name: Eva

Represent the situation with a diagram.

Dylan had $\frac{3}{5}$ of his granola bar left. He ate $\frac{1}{3}$ of the remaining granola bar.

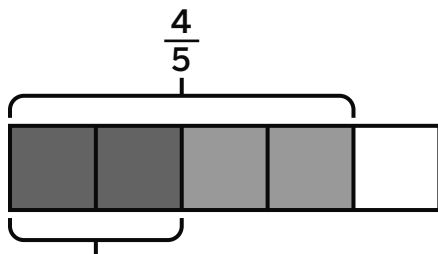


Guided Practice

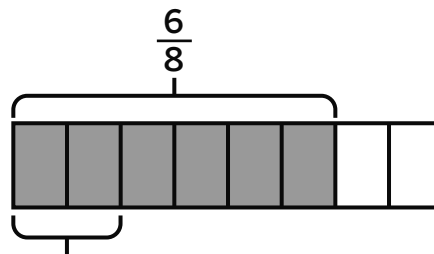


Complete each diagram to represent a fraction of a fraction.

1. $\frac{1}{2}$ of $\frac{4}{5}$



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



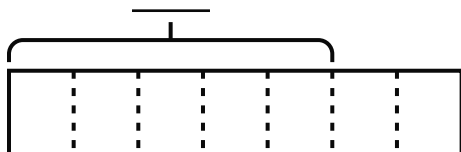


Guided Practice



Represent each situation with a diagram.

3. Dylan has $\frac{5}{7}$ of his book left to read. He reads $\frac{1}{5}$ of the remaining pages.



4. Dylan has $\frac{4}{8}$ of his drink left. He drinks $\frac{1}{2}$ of the remaining drink.



Check



Represent the situation with a diagram.

Dylan had $\frac{4}{6}$ of his sandwich left. He ate $\frac{1}{2}$ of the remaining sandwich.

Multiplying Unit Fractions

ML 3.03

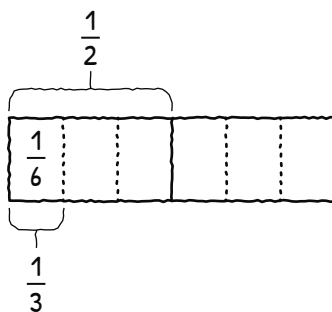


Modeled Review

Name: Priya

Draw a diagram and write an equation to represent the problem.

Santiago has $\frac{1}{2}$ of a pan of pumpkin bread. He eats $\frac{1}{3}$ of the remaining bread. How much of the whole pan does he eat?



equation: $\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$

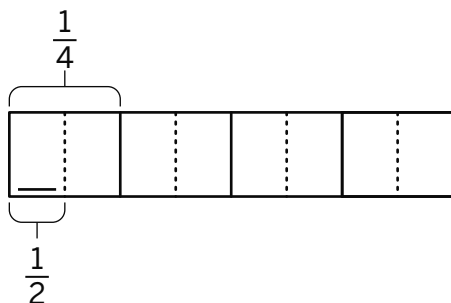


Guided Practice



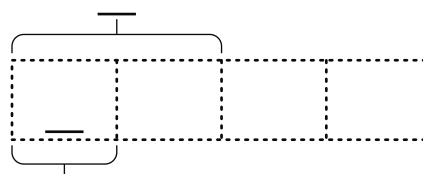
Complete the diagram and the equation to represent the problem.

1. Santiago has $\frac{1}{4}$ of a pan of pumpkin bread. He eats $\frac{1}{2}$ of the remaining bread. How much of the whole pan does he eat?



equation: $\frac{1}{2} \times \frac{1}{4} =$ _____

2. Santiago has $\frac{1}{2}$ of a pan of pumpkin bread. He eats $\frac{1}{2}$ of the remaining bread. How much of the whole pan does he eat?



equation: _____



Guided Practice



Draw a diagram and write an equation to represent the problem.

3. Santiago has $\frac{1}{4}$ a pan of pumpkin bread. He eats $\frac{1}{3}$ of the remaining bread. How much of the whole pan does he eat?

equation: _____

4. Santiago has $\frac{1}{2}$ a pan of pumpkin bread. He eats $\frac{1}{5}$ of the remaining bread. How much of the whole pan does he eat?

equation: _____



Check



Draw a diagram and write an equation to represent the problem.

Santiago has $\frac{1}{3}$ a pan of pumpkin bread. He eats $\frac{1}{5}$ of the remaining bread. How much of the whole pan does he eat?

equation: _____

Multiplying Unit Fractions and Non-Unit Fractions

ML 3.04.A

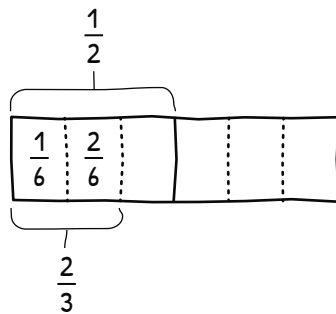


Modeled Review

Name: Han

Draw a diagram and write an equation to represent the problem.

Clare has $\frac{1}{2}$ of a batch of granola left. She eats $\frac{2}{3}$ of the remaining granola. How much of the whole batch of granola does Clare eat?



equation: $\frac{1}{2} \times \frac{2}{3} = \frac{2}{6}$

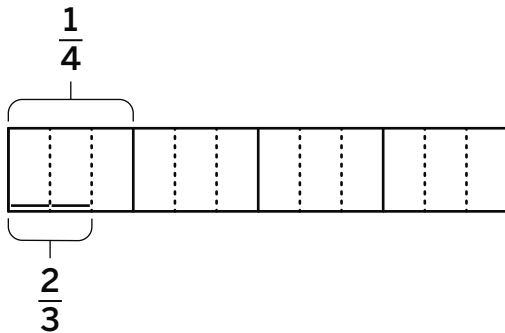


Guided Practice



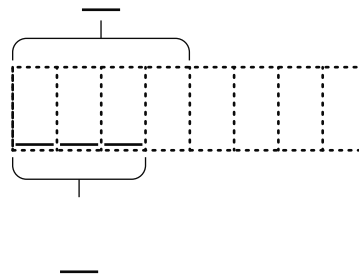
Represent the expression on the diagram. Then determine the product.

1. Diego has $\frac{1}{4}$ of a batch of granola left. He eats $\frac{2}{3}$ of the remaining granola. How much of the whole batch of granola does Diego eat?



equation: $\frac{1}{4} \times \frac{2}{3} =$ _____

2. Avery has $\frac{1}{2}$ of a lasagna left. She eats $\frac{3}{4}$ of the remaining lasagna. How much of the whole lasagna does Avery eat?



equation: $\frac{1}{2} \times \frac{3}{4} =$ _____



Guided Practice



Draw a diagram and write an equation to represent the problem.

3. Jada has $\frac{1}{3}$ of a bowl of salad left. She eats $\frac{2}{5}$ of the remaining salad. How much of the whole bowl of salad does Jada eat?

equation: _____

4. Priya has $\frac{1}{2}$ of a vegetable stir-fry left. She eats $\frac{4}{5}$ of the remaining stir-fry. How much of the whole stir-fry does Priya eat?

equation: _____



Check



Draw a diagram and write an equation to represent the problem.

- Jack has $\frac{1}{2}$ of a spinach quiche left. He eats $\frac{3}{5}$ of the remaining quiche. How much of the whole quiche does Jack eat?

equation: _____

Multiplying Unit Fractions and Mixed Numbers

ML 3.04.B

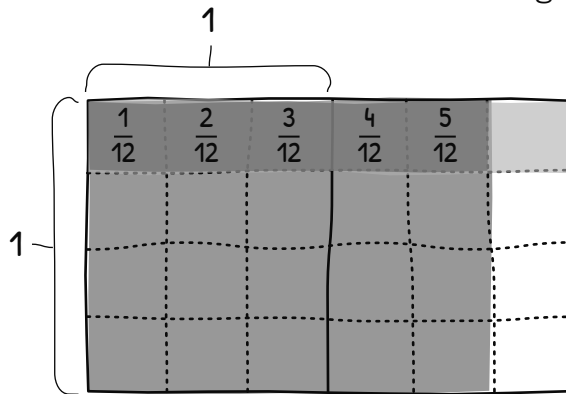


Modeled Review

Name: Clare

Draw a diagram and write an equation to represent the problem.

Santiago is making $\frac{1}{4}$ of a batch of dog treats. The full recipe calls for $1\frac{2}{3}$ cups of flour. How much flour does Santiago need?



equation: $\frac{1}{4} \times 1\frac{2}{3} = \frac{5}{12}$



Guided Practice



Represent the expression on the diagram. Then determine the product.

- Eva is making $\frac{1}{4}$ of a batch of scones. The full recipe calls for $1\frac{1}{2}$ cups of flour. How much flour does Eva need?

Diagram	Moves
	<p>Step 1: Draw horizontal lines and shade in the diagram to represent $\frac{1}{4}$.</p> <p>Step 2: Draw vertical lines and shade in the diagram to represent $1\frac{1}{2}$.</p> <p>Step 3: Identify the region where the shading overlaps to represents $\frac{1}{4} \times 1\frac{1}{2}$.</p>

equation: $\frac{1}{4} \times 1\frac{1}{2} =$ _____

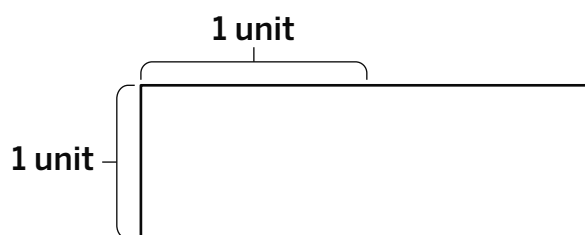


Guided Practice



Draw a diagram and write an equation to represent the problem.

2. Tristan is making $\frac{1}{3}$ of a batch of muffins. The full recipe calls for $1\frac{3}{4}$ cups of flour. How much flour does Tristan need?



equation: _____

3. Avery is making $\frac{1}{5}$ of a batch of bread. The full recipe calls for $1\frac{1}{2}$ cups of flour. How much flour does Avery need?

equation: _____



Check



Draw a diagram and write an equation to represent the problem.

Jack is making $\frac{1}{2}$ of a batch of pancakes. The full recipe calls for $1\frac{1}{4}$ cups of flour. How much flour does Jack need?

equation: _____

Multiplying Non-Unit Fractions and Mixed Numbers

ML 3.05

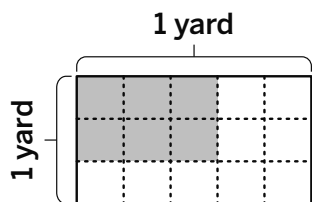


Modeled Review



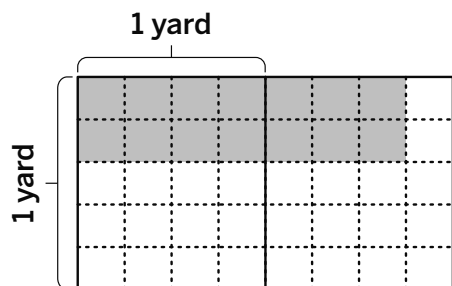
Name: Santiago

1. The shaded region measures $\frac{3}{5}$ yard by $\frac{2}{3}$ yard. Determine the area of the shaded region.



answer: $\frac{6}{15}$ square yard

2. The shaded region measures $1\frac{3}{4}$ yards by $\frac{2}{5}$ yard. Determine the area of the shaded region.



answer: $\frac{14}{20}$ square yard

There are 20 parts in one whole.

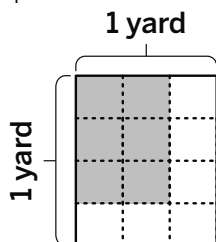


Guided Practice



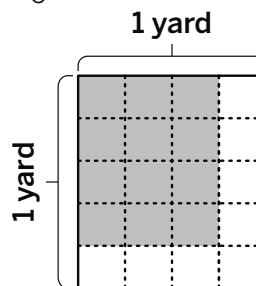
Determine the area of the shaded region. Show your thinking.

1. The shaded region measures $\frac{2}{3}$ yard by $\frac{3}{4}$ yard.



equation: _____

2. The shaded region measures $\frac{3}{4}$ yard by $\frac{4}{5}$ yard.



equation: _____

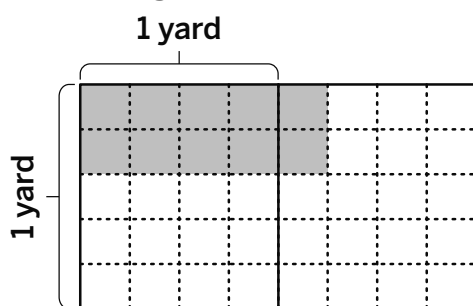


Guided Practice



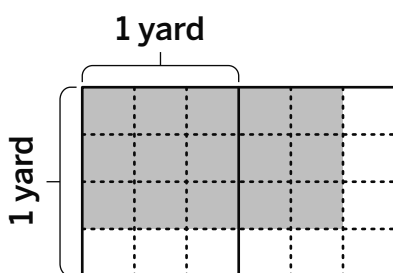
Determine the area of the shaded region. Show your thinking.

3. The shaded region measures $1\frac{1}{4}$ yards by $\frac{2}{5}$ yard. Determine the area of the shaded region.



answer: _____

4. The shaded region measures $1\frac{2}{3}$ yards by $\frac{3}{4}$ yard. Determine the area of the shaded region.



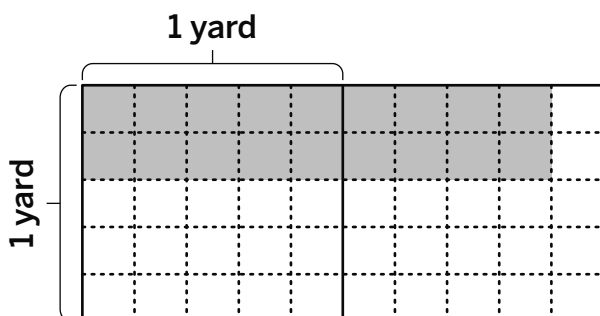
answer: _____



Check



The shaded region measures $1\frac{4}{5}$ yards by $\frac{2}{5}$ yard. Determine the area of the shaded region.



answer: _____

Connecting Equations to Diagrams

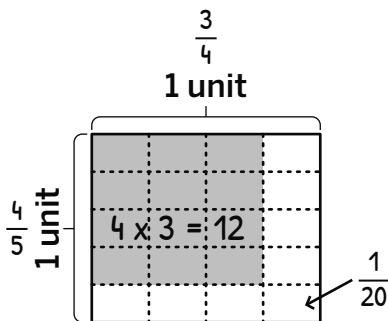
ML 3.06



Modeled Review

Name: Diego

Write an equation to represent the area of the shaded rectangular region in the diagram, in square units.



Area = $\frac{4}{5} \times \frac{3}{4}$

equation: $\frac{4}{5} \times \frac{3}{4} = \frac{12}{20}$

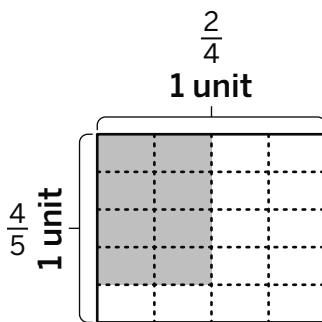


Guided Practice



Write an equation to represent the area of the shaded rectangular region in the diagram, in square units.

1.



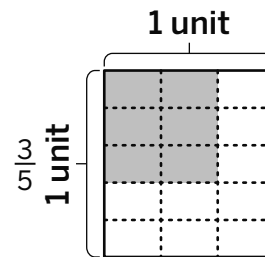
expression: $\frac{4}{5} \times \frac{2}{4}$

unit size: $\frac{1}{5 \times 4} =$ _____

shaded units: $4 \times 2 =$ _____

equation: $\frac{4}{5} \times \frac{2}{4} =$ _____

2.



expression: $\frac{3}{5} \times$ _____

unit size: _____

shaded units: _____

equation: _____

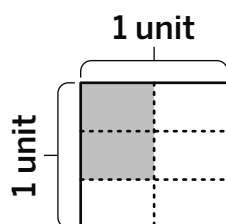


Guided Practice



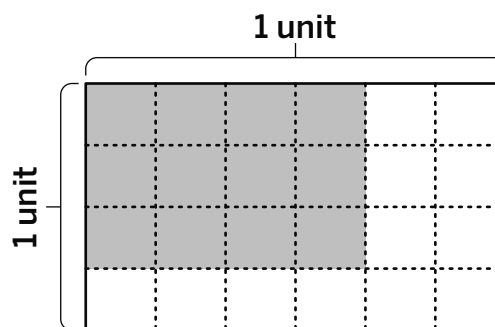
Write an equation to represent the area of the shaded rectangular region in the diagram, in square units.

3.



equation: _____

4.



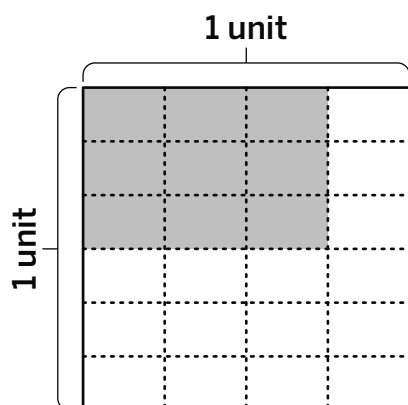
equation: _____



Check



Write an equation to represent the area of the shaded rectangular region in the diagram, in square units.



equation: _____

Multiplying With Fractions and Mixed Numbers

ML 3.07



Modeled Review

Name: Priya

Determine the product of each expression. Show your thinking.

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

$$\frac{2}{4} \times \frac{2}{3} = \frac{2 \times 2}{4 \times 3} = \frac{4}{12}$$

answer: $\frac{4}{12}$

2. $2\frac{2}{5} \times \frac{3}{4}$

$$2\frac{2}{5} = \frac{5}{5} + \frac{5}{5} + \frac{2}{5} = \frac{12}{5} \quad \frac{12 \times 3}{5 \times 4} = \frac{36}{20}$$

answer: $\frac{36}{20}$ 

Guided Practice



Determine the product of each expression. Show your thinking.

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

$$\frac{2}{3} \times \frac{3}{4} = \frac{2 \times 3}{3 \times 4} = \frac{6}{\square}$$

2. $\frac{4}{5} \times \frac{1}{2}$

$$\frac{4}{5} \times \frac{1}{2} = \frac{4 \times 1}{5 \times 2} = \frac{\square}{10}$$

3. $\frac{5}{6} \times \frac{1}{4}$

4. $\frac{4}{5} \times \frac{2}{3}$

5. $2\frac{1}{4} \times \frac{2}{5}$

$$2\frac{1}{4} = \frac{4}{4} + \frac{4}{4} + \frac{1}{4} = \frac{\square}{4}$$

$$\frac{9}{4} \times \frac{2}{5} = \frac{\square}{4 \times 5} \times 2 = \frac{\square}{\square}$$

6. $2\frac{1}{3} \times \frac{4}{6}$

$$2\frac{1}{3} = \frac{\square}{3} + \frac{\square}{3} + \frac{1}{3} = \frac{\square}{\square}$$

$$\frac{\square}{3} \times \frac{4}{6} = \frac{\square \times \square}{\square \times \square} = \frac{\square}{\square}$$



Guided Practice



Determine the product of each expression. Show your thinking.

7. $1\frac{2}{4} \times \frac{2}{3}$
 $1\frac{2}{4} =$

answer: _____

8. $1\frac{3}{4} \times \frac{2}{3}$

answer: _____



Check



Determine the product of each expression. Show your thinking.

1. $\frac{3}{4} \times \frac{4}{5}$

answer: _____

2. $2\frac{2}{3} \times \frac{2}{5}$

answer: _____

Solving Missing-Factor Problems With Fractions and Mixed Numbers

ML 3.08



Modeled Review

Name: Eva

Determine the missing factor in the equation. Show your thinking.

$$\frac{7}{5} \times \frac{4}{3} = \frac{28}{15}$$

$$\frac{? \times 4}{? \times 3} = \frac{28}{15}$$

$$7 \times 4 = 28$$

$$5 \times 3 = 15$$



Guided Practice



Determine the missing factor in each equation.

1. $\frac{5}{2} \times \underline{\quad} = \frac{15}{8}$

2. $\underline{\quad} \times 2 = \frac{14}{4}$

$$\frac{5 \times ?}{2 \times ?} = \frac{15}{8}$$

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

$$5 \times \underline{\quad} = 15$$

$$\frac{? \times 2}{? \times 1} = \frac{14}{4}$$

$$2 \times \underline{\quad} = 8$$

$$\underline{\quad} \times 2 = 14$$

$$\underline{\quad} \times 1 = 4$$



Guided Practice



Determine the missing factor in each equation. Show your thinking.

3. $1\frac{3}{4} \times \underline{\hspace{1cm}} = \frac{21}{20}$

$$1\frac{3}{4} = \frac{\boxed{}}{4}$$

$$\frac{\boxed{} \times \boxed{}}{4 \times \boxed{}} = \frac{21}{20}$$

4. $\underline{\hspace{1cm}} \times 2\frac{1}{3} = \frac{35}{18}$

5. $\frac{8}{3} \times \underline{\hspace{1cm}} = \frac{48}{21}$

6. $\underline{\hspace{1cm}} \times \frac{3}{7} = \frac{27}{28}$



Check



Determine the missing factor in the equation. Show your thinking.

$\frac{6}{5} \times \underline{\hspace{1cm}} = \frac{24}{45}$

Comparing Products Without Multiplying

ML 3.09



Modeled Review

Name: Avery

Compare the size of the product using $<$, $>$, or $=$.

1. $1,300 \times \frac{2}{3} \underline{\hspace{1cm}} 1,300$

2. $1,300 \times \frac{11}{9} \underline{\hspace{1cm}} 1,300$

If I multiply by a factor less than or equal to 1, my product will be less than or equal to the other factor.



Guided Practice



1. Fill in the blanks in the table using $<$, $>$, or $=$.

Expression	The product is ($<$, $>$, or $=$)
$100 \times \frac{2}{2}$	$100 \times \frac{2}{2}$ is _____ 100 because $\frac{2}{2}$ is _____ 1.
$100 \times \frac{1}{2}$	$100 \times \frac{1}{2}$ is _____ 100 because $\frac{1}{2}$ is _____ 1.
$100 \times \frac{3}{2}$	$100 \times \frac{3}{2}$ is _____ 100 because $\frac{3}{2}$ is _____ 1.



Guided Practice



Compare the size of the product using $<$, $>$, or $=$.

2. $545 \times \frac{3}{4}$ _____ 545

3. $545 \times \frac{7}{4}$ _____ 545

4. $650 \times \frac{3}{2}$ _____ 650

5. $650 \times \frac{7}{7}$ _____ 650

6. $800 \times \frac{3}{3}$ _____ 800

7. $800 \times \frac{2}{5}$ _____ 800

8. $1,050 \times \frac{10}{3}$ _____ 1,050

9. $1,050 \times \frac{8}{8}$ _____ 1,050

10. $1,200 \times \frac{6}{5}$ _____ 1,200

11. $1,200 \times \frac{1}{3}$ _____ 1,200



Check



Compare the size of the product using $<$, $>$, or $=$.

1. $1,100 \times \frac{3}{5}$ _____ 1,100

2. $1,100 \times \frac{10}{9}$ _____ 1,100

Comparing the Size of Products to Factors Without Multiplying

ML 3.10



Modeled Review

Name: Maya

For Problems 1 and 2, complete the comparison using $<$, $>$, or $=$.

1. $\frac{2}{5} \times \frac{11}{8} > \frac{2}{5}$

$\frac{11}{8}$ is greater than 1.

2. $\frac{2}{5} \times \frac{11}{8} < \frac{11}{8}$

$\frac{2}{5}$ is less than 1.



Guided Practice



1. Fill in the blanks in the table by comparing the product to the first factor using *less than*, *equal to*, or *greater than*.

Input	Output
$\frac{1}{2} \times \frac{5}{5}$	
$\frac{1}{3} \times \frac{3}{7}$	
$\frac{1}{7} \times \frac{4}{3}$	
$\frac{1}{4} \times \frac{1}{2}$	
$\frac{1}{6} \times \frac{8}{8}$	
$\frac{1}{5} \times \frac{3}{2}$	
$\frac{1}{8} \times \frac{1}{8}$	



Guided Practice



Complete the comparison using $<$, $>$, or $=$.

2. $\frac{10}{11} \times \frac{11}{10}$ _____ $\frac{10}{11}$

3. $\frac{10}{11} \times \frac{11}{10}$ _____ $\frac{11}{10}$

4. $\frac{14}{13} \times \frac{12}{13}$ _____ $\frac{14}{13}$

5. $\frac{14}{13} \times \frac{12}{13}$ _____ $\frac{12}{13}$

6. $\frac{3}{8} \times \frac{4}{4}$ _____ $\frac{3}{8}$

7. $\frac{3}{8} \times \frac{4}{4}$ _____ $\frac{4}{4}$

8. $\frac{1}{6} \times \frac{5}{2}$ _____ $\frac{1}{6}$

9. $\frac{1}{6} \times \frac{5}{2}$ _____ $\frac{5}{2}$



Check



Complete the comparison using $<$, $>$, or $=$.

1. $\frac{3}{7} \times \frac{5}{4}$ _____ $\frac{3}{7}$

2. $\frac{3}{7} \times \frac{5}{4}$ _____ $\frac{5}{4}$

Representing Dividing Unit Fractions by Whole Numbers

ML 3.11

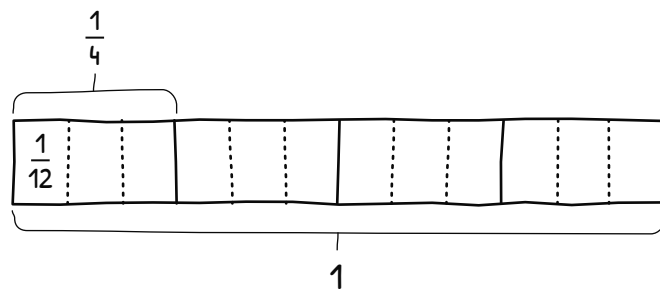


Modeled Review

Name: Tristan

3 people equally share $\frac{1}{4}$ of a bag of trail mix.

How much of a whole bag of trail mix does each person get? Draw a diagram to show your thinking.



equation: $\frac{1}{4} \div 3 = \frac{1}{12}$

answer: $\frac{1}{12}$

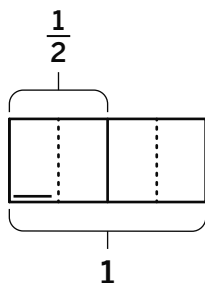


Guided Practice



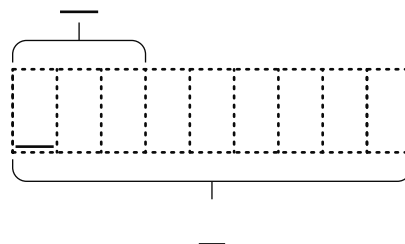
Complete the division equation to represent the situation and solve the problem. Show your thinking.

1. 2 friends equally share $\frac{1}{2}$ of a bag of pretzels. How much of a whole bag of pretzels does each person get?



equation: $\frac{1}{2} \div 2 =$ _____

2. 3 students equally share $\frac{1}{3}$ of a bag of popcorn. How much of a whole bag of popcorn does each person get?



equation: $\frac{1}{3} \div 3 =$ _____



Guided Practice



Write a division equation to represent the situation and solve the problem.
Show your thinking.

3. 2 people equally share $\frac{1}{5}$ of a bag of dried fruit. How much of a whole bag of dried fruit does each person get?

1

equation: _____

answer: _____

4. 5 people equally share $\frac{1}{3}$ of a bag of granola. How much of a whole bag of granola does each person get?

equation: _____

answer: _____



Check



4 people equally share $\frac{1}{5}$ of a bag of beef jerky.

How much of a whole bag of beef jerky does each person get?

equation: _____

answer: _____

Representing Dividing Whole Numbers by Unit Fractions

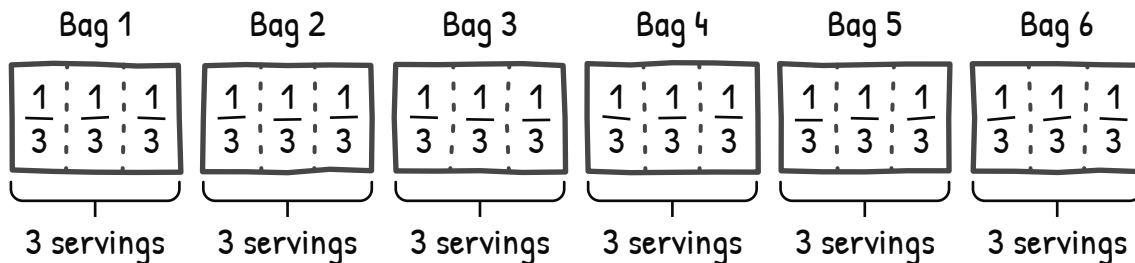
ML 3.12



Modeled Review

Name: Jada

One serving of popcorn is $\frac{1}{3}$ of a bag. How many servings are there in 6 bags?



$$6 \times 3 = 18 \text{ servings}$$

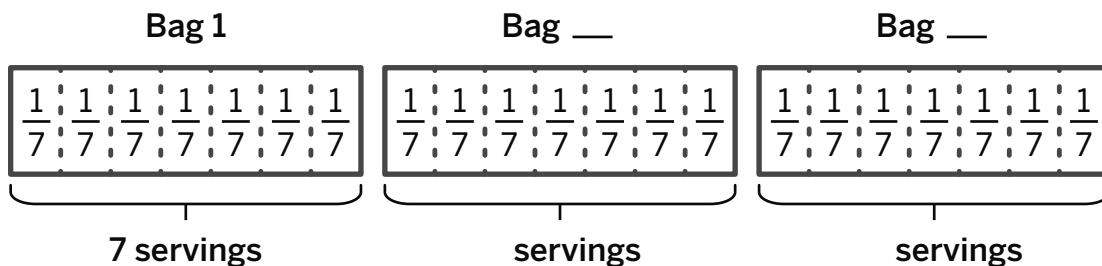
equation: $6 \div \frac{1}{3} = 18$ answer: 18 servings

Guided Practice



Fill in the missing information in the diagram to show your thinking.

1. One serving of pretzels is $\frac{1}{7}$ of a bag. How many servings are there in 3 bags?

equation: $3 \div \frac{1}{7} =$ _____

answer: _____

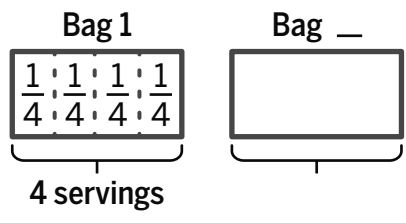


Guided Practice



Write a division equation to represent the situation. Then solve the problem. Show or explain your thinking.

2. One serving of granola is $\frac{1}{4}$ of a bag. How many servings are in 2 bags?



equation: _____ answer: _____

3. One serving of hamburger is $\frac{1}{3}$ pounds. How many hamburgers can be made with 5 pounds of hamburger meat?

equation: _____ answer: _____



Check



Write a division equation to represent the situation. Then solve the problem. Show or explain your thinking.

One serving of dog food is $\frac{1}{6}$ of a can. How many servings are there in 4 cans?

equation: _____ answer: _____

Connecting Division Expressions and Story Problems

ML 3.13



Modeled Review



Story problem	Jada has 2 pounds of fish. She wants to serve each person $\frac{1}{4}$ pound of fish. How many people can she serve?	Jada and her friend split $\frac{1}{4}$ pound of fish evenly between them. How much fish does each person get?
Problem type	"how many parts"	equal sharing
Expression	$2 \div \frac{1}{4}$ <div style="display: flex; justify-content: space-around; font-size: small;"> starting amount size of each part </div>	$\frac{1}{4} \div 2$ <div style="display: flex; justify-content: space-around; font-size: small;"> starting amount number of shares/groups </div>
Size of quotient	larger than 2	less than $\frac{1}{4}$



Guided Practice



Represent each story problem with the matching expression from the bank.

$$\frac{1}{2} \div 5$$

$$5 \div \frac{1}{2}$$

1. Jada has 5 cups of popcorn she wants to share with her friends. She gives each friend $\frac{1}{2}$ cup. How many friends were given popcorn?

--	--	--	--	--	--	--	--

2. Jada has $\frac{1}{2}$ pound of granola to split with friends. If she shares the granola between her and 4 friends, how much does each person get?

$\frac{1}{10}$				
----------------	--	--	--	--

$\frac{1}{2}$



Guided Practice



Represent each story problem with the matching expression from the bank.

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

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

3. Jada has $\frac{1}{3}$ of a bag of dog food for her dog over the next 4 days. How much of the bag of food can her dog eat each day?

4. Jada bought 4 pounds of fruit at the market. A serving size of fruit is $\frac{1}{3}$ pound. How many single servings will Jada be able to make?

5. Jada brings 4 sub sandwiches to a picnic. She wants to cut each sandwich into thirds. How many people will she be able to serve?

6. Jada picked $\frac{1}{3}$ pound of blueberries. She wants to share the blueberries equally among her four friends. How many pounds of blueberries will each friend get?



Check



Represent each story problem with the matching expression from the bank.

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

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

1. Jada has 3 cups of popcorn. She gives each friend $\frac{1}{4}$ cup. How many friends were given popcorn?

2. Jada buys $\frac{1}{4}$ pound of granola to share between her and 2 friends. How much granola does each person get?

Representing Situations With Multiplication and Division Equations

ML 3.14



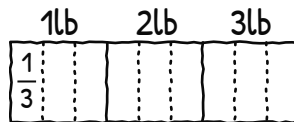
Modeled Review

Name: Kai

Write a multiplication equation and a division equation that represents the situation.

Diego has 3 pounds of shrimp. He wants each person at his dinner party to have $\frac{1}{3}$ pound. How many people can have a serving of shrimp?

There are 3 pounds of shrimp and each pound is split into thirds.



multiplication equation: $3 \times 3 = 9$ division equation: $3 \div \frac{1}{3} = 9$



Guided Practice



1. Write a multiplication equation and a division equation for each situation.

Story problem	Diagram	Equations
Diego picked $\frac{1}{2}$ pound of berries. He wants to eat the same amount over 3 days. How many berries can he eat each day?		<p>multiplication: $\frac{1}{3} \times \frac{1}{2} = \underline{\hspace{1cm}}$</p> <p>division: $\frac{1}{2} \div \underline{\hspace{1cm}} = \frac{1}{6}$</p>
Diego and his friend split $\frac{1}{4}$ of a loaf of bread. How much of the loaf did each person eat?		<p>multiplication: $\underline{\hspace{1cm}} \times \frac{1}{4} = \frac{1}{8}$</p> <p>division: $\frac{1}{4} \div \underline{\hspace{1cm}} = \frac{1}{8}$</p>



Guided Practice



Write a multiplication equation and a division equation for each situation. Draw a diagram if it is helpful.

2. Diego has 2 pounds of granola that he wants to split into $\frac{1}{3}$ pound servings. How many servings can Diego make?

multiplication equation: _____

division equation: _____

3. Diego has $\frac{1}{3}$ of an apple pie that he wants to split between himself and two friends. How much of the pie will each person eat?

multiplication equation: _____

division equation: _____



Check



Write a multiplication equation and a division equation for the situation.

Diego has $\frac{1}{5}$ of a pan of lasagna that he wants to split between himself and 5 friends. How much of the lasagna will each person get?

multiplication equation: _____

division equation: _____

Solving Story Problems With Fractions

ML 3.15



Modeled Review

Name: Jack

Write a multiplication equation or a division equation for each situation. Then solve the problem.

1. A bird had $\frac{1}{6}$ of a piece of bread and ate $\frac{1}{5}$ of the piece. How much of the whole piece of bread did the bird eat?

equation: $\frac{1}{5} \times \frac{1}{6} = \frac{1}{30}$

answer: $\frac{1}{30}$ of the piece

2. One serving of hamster food is $\frac{1}{3}$ of a container. How many servings are in 4 containers?

equation: $4 \div \frac{1}{3} = 12$

answer: 12 servings



Guided Practice



Write a multiplication equation or a division equation for each situation. Then solve the problem.

1. A rabbit had $\frac{1}{4}$ of a carrot and ate $\frac{1}{2}$ of that amount. How much of the whole carrot did the rabbit eat?

equation: $\frac{1}{4} \times$ _____

answer: _____ of a carrot

2. One bowl of birdseed is $\frac{1}{4}$ full, and you use it to feed 2 birds. If each bird gets the same amount, what fraction of the whole bowl does each bird get?

equation: _____ $\div 2$

answer: _____ bowl of birdseed



Guided Practice



Write a multiplication equation or a division equation for each situation. Then solve the problem.

3. A bird has $\frac{1}{5}$ of a packet of seeds. It eats $\frac{1}{4}$ of that amount. How much of the whole packet does the bird eat?

equation: _____ answer: _____

4. One serving of trail mix is $\frac{1}{3}$ of a bag. How many servings are in 5 bags?

equation: _____ answer: _____

5. A kitten has $\frac{1}{6}$ of a pound of cat food. It eats $\frac{1}{4}$ of that amount. How much of the whole pound of cat food does the kitten eat?

equation: _____ answer: _____

6. One container of fish food is $\frac{1}{5}$ full, and you feed 5 fish. If each fish gets the same amount, what fraction of the whole container does each fish get?

equation: _____ answer: _____



Check



Write a multiplication equation or a division equation for each situation. Then solve the problem.

1. A rabbit has $\frac{1}{7}$ of a bag of lettuce. It eats $\frac{1}{5}$ of that amount. How much of the whole bag does the rabbit eat?

equation: _____ answer: _____

2. One serving of cat food is $\frac{1}{4}$ of a container. How many servings are in 5 containers?

equation: _____ answer: _____

Unit 4

Mini-Lessons

Estimating and Finding Products of Multi-Digit Numbers

ML 4.02



Modeled Review

Name: Priya

Estimate the product. Then solve the problem using any strategy. Show your work.

$$29 \times 41$$

estimate: $30 \times 40 = 1,200$

answer: 1,189

	20	9	
40	800	360	800
			360
			20
1	20	9	+ 9
			<u>1,189</u>



Guided Practice



Use the equation to estimate the product. Then determine the product and check for reasonableness. Show your work.

1. 21×49

estimate: $20 \times 50 =$ _____

answer: _____

2. 502×4

estimate: _____ $\times 4 =$ _____

answer: _____



Guided Practice



Estimate the product. Then solve each problem using any strategy. Show your work.

3. 13×29

estimate: _____

answer: _____

4. 393×9

estimate: _____

answer: _____



Check



Estimate the product. Then solve the problem using any strategy. Show your work.

498×4

estimate: _____

answer: _____

Representing Multiplication With Area Diagrams

ML 4.03



Modeled Review

Name: Avery

Determine the product. Show your thinking.

$$345 \times 23 = \underline{7,935}$$

	300	40	5
20	6,000	800	100
3	900	120	15

$$\begin{array}{r}
 6,000 \\
 900 \\
 800 \\
 120 \\
 100 \\
 + 15 \\
 \hline
 7,935
 \end{array}$$



Guided Practice



Determine the product. Show your thinking.

1. $34 \times 52 = \underline{\hspace{2cm}}$

	30	4
50	$50 \times 30 = 1,500$	$50 \times 4 = 200$
2	$2 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$	$\underline{\hspace{1cm}} \times 4 = \underline{\hspace{1cm}}$

$$\begin{array}{r}
 1,500 \\
 200 \\
 \hline
 \square \\
 + \square \\
 \hline
 \square
 \end{array}$$

2. $231 \times 45 = \underline{\hspace{2cm}}$

	200	30	1
40	$40 \times 2,000 = 8,000$		
5	$5 \times 2,000 = \underline{\hspace{2cm}}$		



Guided Practice



Determine the product. Show your thinking.

3. $63 \times 25 =$ _____

4. $354 \times 71 =$ _____

	60	3
—		
—		



Check



Determine the product. Show your thinking.

$255 \times 31 =$ _____

Finding Products Using a Partial Products Algorithm

ML 4.04



Modeled Review

Name: Clare

Determine the product.

$$639 \times 17 = \underline{10,863}$$

	600	30	9	6,000
10	6,000	300	90	300
7	4,200	210	63	90
				4,200
				210
				+ 63
				<u>10,863</u>

Name: Dylan

Determine the product.

$$639 \times 17 = \underline{10,863}$$

639
$\times 17$
<u>63</u>
210
4,200
90
300
<u>+ 6,000</u>
<u>10,863</u>



Guided Practice



1. Circle the expressions that can be added together to calculate the product $5,279 \times 4$. Use the diagram if it is helpful.

	5,000	200	70	9	<u>$4 \times 5,000$</u>	4×70
4	20,000	800	280	36	$200 \times 5,000$	70×9
					4×200	4×9

2. Use the expressions you circled in Problem 1 to show how each partial product value was determined.

5,279	
$\times 4$	
<u>36</u>	4×9
280	4×70
800	
+ 2000	
<u>21,116</u>	



Guided Practice



Use a partial products algorithm to determine the product. Show your thinking.

3. $245 \times 13 =$ _____

4. $639 \times 21 =$ _____

	2	4	5	
×		1	3	
<hr/>				
		1	5	
	1	2	0	
+				
<hr/>				



Check



Use a partial products algorithm to determine the product. Show your thinking.

$436 \times 24 =$ _____

Finding Products Using the Standard Algorithm With No Composing

ML 4.05



Modeled Review

Name: Kai

Determine the product.

$$122 \times 34 = \underline{4,148}$$

$$\begin{array}{r} 122 \\ \times 34 \\ \hline 8 \quad 4 \times 2 \\ 80 \quad 4 \times 20 \\ 400 \quad 4 \times 100 \\ 60 \quad 30 \times 2 \\ 600 \quad 30 \times 20 \\ + 3,000 \quad 30 \times 100 \\ \hline 4,148 \end{array}$$

Name: Priya

Determine the product.

$$122 \times 34 = \underline{4,148}$$

$$\begin{array}{r} 122 \\ \times 34 \\ \hline 488 \quad 4 \times 122 \\ + 3,660 \quad 30 \times 122 \\ \hline 4,148 \end{array}$$



Guided Practice



Use partial products and the standard algorithm to determine the product.

1. $413 \times 22 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 4 \ 1 \ 3 \\ \times 2 \ 2 \\ \hline 6 \\ 2 \ 0 \\ 8 \ 0 \ 0 \\ \hline \square \ \square \\ \square \ \square \ \square \\ + \square \ \square \ \square \ \square \\ \hline \square \ \square \ \square \ \square \end{array}$$

$$\begin{array}{r} 4 \ 1 \ 3 \\ \times 2 \ 2 \\ \hline \square \ 2 \ 6 \\ + \square \ \square \ \square \ \square \\ \hline \square \ \square \ \square \ \square \end{array}$$



Guided Practice



Use the standard algorithm to determine the product. Show your thinking.

2. $123 \times 21 =$ _____

$$\begin{array}{r} 123 \\ \times 21 \\ \hline 123 \\ + \\ \hline \end{array}$$

3. $231 \times 33 =$ _____

$$\begin{array}{r} 231 \\ \times 33 \\ \hline 693 \\ 693 \\ \hline \end{array}$$

4. $412 \times 11 =$ _____

5. $312 \times 32 =$ _____



Check



Use the standard algorithm to determine the product. Show your thinking.

$234 \times 12 =$ _____

Finding Products Using the Standard Algorithm When Composing 1 Unit

ML 4.06



Modeled Review

Name: HanDetermine the product of 124×13 .

$$\begin{array}{r}
 124 \\
 \times 13 \\
 \hline
 12 \\
 60 \\
 300 \\
 40 \\
 200 \\
 + 1,000 \\
 \hline
 1,612
 \end{array}$$

Name: EvaDetermine the product of 124×13 .

$$\begin{array}{r}
 1 \\
 124 \\
 \times 13 \\
 \hline
 372 \\
 + 1,240 \\
 \hline
 1,612
 \end{array}$$



Guided Practice



Determine the product using the standard algorithm.

1. $213 \times 4 =$ _____

$$\begin{array}{r}
 1 \\
 213 \\
 \times 4 \\
 \hline
 \square \square \square 2
 \end{array}$$

2. $142 \times 31 =$ _____

$$\begin{array}{r}
 1 \\
 142 \\
 \times 31 \\
 \hline
 142 \\
 4,260 \\
 \hline
 \square \square \square \square
 \end{array}$$

3. $131 \times 42 =$ _____

$$\begin{array}{r}
 1 \\
 131 \\
 \times 42 \\
 \hline
 262 \\
 + \square \square \square \square \\
 \hline
 \square \square \square \square
 \end{array}$$

4. $215 \times 12 =$ _____

$$\begin{array}{r}
 \square \\
 215 \\
 \times 12 \\
 \hline
 \square \square \square \square \\
 + \square \square \square \square \\
 \hline
 \square \square \square \square
 \end{array}$$



Guided Practice



Determine the product using the standard algorithm.

5. $213 \times 24 =$ _____

6. $315 \times 31 =$ _____

	2	1	3	
×				
<hr/>				
+				
<hr/>				

7. $162 \times 13 =$ _____

8. $326 \times 12 =$ _____



Check



Determine the product using the standard algorithm.

$135 \times 21 =$ _____

Finding Products Using the Standard Algorithm When Composing More Than 1 Unit

ML 4.07



Modeled Review

Name: Jada

Determine the product using the standard algorithm.

$$6,742 \times 8 = \underline{53,936}$$

$$\begin{array}{r} 5 \ 3 \ 1 \\ 6, \ 7 \ 4 \ 2 \\ \times \qquad \qquad 8 \\ \hline 5 \ 3, \ 9 \ 3 \ 6 \end{array}$$



Guided Practice



Determine the product using the standard algorithm.

1. $5,672 \times 4 =$ _____

$$\begin{array}{r} 2 \ 2 \\ 5, \ 6 \ 7 \ 2 \\ \times \qquad \qquad 4 \\ \hline \boxed{} \boxed{} 6 \ 8 \ 8 \end{array}$$

2. $8,359 \times 7 =$ _____

$$\begin{array}{r} 2 \ 4 \ 6 \\ 8, \ 3 \ 5 \ 9 \\ \times \qquad \qquad 7 \\ \hline \boxed{} \boxed{} 5 \ 1 \ 3 \end{array}$$

3. $9,214 \times 6 =$ _____

$$\begin{array}{r} 1 \ 2 \\ 9, \ 2 \ 1 \ 4 \\ \times \qquad \qquad 6 \\ \hline \boxed{} \boxed{} 2 \ 8 \ 4 \end{array}$$

4. $7,142 \times 5 =$ _____

$$\begin{array}{r} 2 \ 1 \\ 7, \ 1 \ 4 \ 2 \\ \times \qquad \qquad 5 \\ \hline \boxed{} \boxed{} 7 \ 1 \ 0 \end{array}$$



Guided Practice



Determine the product using the standard algorithm.

5. $6,459 \times 2 =$ _____

$$\begin{array}{r} 11 \\ 6,459 \\ \times 2 \\ \hline \boxed{}\boxed{}\boxed{}\boxed{}\boxed{} \end{array}$$

6. $4,586 \times 5 =$ _____

$$\begin{array}{r} 243 \\ 4,586 \\ \times 5 \\ \hline \boxed{}\boxed{}\boxed{}\boxed{}\boxed{} \end{array}$$

7. $8,452 \times 6 =$ _____

8. $7,195 \times 9 =$ _____



Check



Determine the product using the standard algorithm.

$4,523 \times 7 =$ _____

Finding Products Using the Standard Algorithm With Composing in More Than One Place

ML 4.08



Modeled Review

Name: Jack

Determine the product using the standard algorithm.

$$583 \times 67 = \underline{39,061}$$

$$\begin{array}{r}
 4 1 \\
 5 2 \\
 5 8 3 \\
 \times 6 7 \\
 \hline
 4, 0 8 1 \\
 + 3 4, 9 8 0 \\
 \hline
 3 9, 0 6 1
 \end{array}$$



Guided Practice



Determine the product using the standard algorithm.

1. $749 \times 58 =$ _____

2. $326 \times 89 =$ _____

$$\begin{array}{r}
 2 4 \\
 3 7 \\
 7 4 9 \\
 \times 5 8 \\
 \hline
 5, 9 9 2 \\
 + 3 7, 4 5 0 \\
 \hline
 \boxed{}\boxed{}\boxed{}\boxed{}\boxed{}\boxed{}
 \end{array}$$

$$\begin{array}{r}
 2 5 \\
 3 2 6 \\
 \times 8 9 \\
 \hline
 2, 9 3 4 \\
 + \boxed{}\boxed{}\boxed{}\boxed{}0 \\
 \hline
 \boxed{}\boxed{}\boxed{}\boxed{}\boxed{}\boxed{}
 \end{array}$$



Guided Practice



Determine the product using the standard algorithm.

3. $248 \times 75 =$ _____

$$\begin{array}{r} 24 \\ \times 248 \\ \hline 1,240 \\ + \\ \hline \end{array}$$

4. $395 \times 62 =$ _____

$$\begin{array}{r} 395 \\ \times 62 \\ \hline \\ + \\ \hline \end{array}$$

5. $417 \times 86 =$ _____

6. $539 \times 94 =$ _____



Check



Determine the product using the standard algorithm.

$462 \times 74 =$ _____

Multi-Digit Multiplication Fluency

ML 4.09



Modeled Review

Name: Tristan

Determine the product using the standard algorithm.

$$123 \times 21 = \underline{2,583}$$

$$\begin{array}{r} 123 \\ \times 21 \\ \hline 123 \\ + 2,460 \\ \hline 2,583 \end{array}$$

Name: Shawn

Determine the product using the standard algorithm.

$$138 \times 63 = \underline{8,694}$$

$$\begin{array}{r} 138 \\ \times 63 \\ \hline 414 \\ + 8,280 \\ \hline 8,694 \end{array}$$



Guided Practice



Determine the product using the standard algorithm.

1. $6,789 \times 4 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 6,789 \\ \times 4 \\ \hline \end{array}$$

2. $235 \times 22 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 235 \\ \times 22 \\ \hline 470 \\ + \hspace{2cm} 0 \\ \hline \end{array}$$



Guided Practice



Determine the product using the standard algorithm.

3. $672 \times 32 =$ _____

4. $372 \times 24 =$ _____

$$\begin{array}{r} 1 \\ 672 \\ \times 32 \\ \hline 1344 \\ + \\ \hline \end{array}$$

5. $715 \times 45 =$ _____

6. $678 \times 53 =$ _____



Check



Determine the product using the standard algorithm.

1. $497 \times 51 =$ _____

2. $234 \times 56 =$ _____

Dividing Multi-Digit Dividends by One-Digit Divisors Without Remainders

ML 4.10



Modeled Review

Name: Dylan

Determine the quotient.

$$4,856 \div 4 = \underline{1,214}$$

$\begin{array}{r} 4 \overline{) 4,856} \\ - 4,000 \\ \hline 856 \\ - 800 \\ \hline 56 \\ - 40 \\ \hline 16 \\ - 16 \\ \hline 0 \end{array}$	$\begin{array}{l} 4 \times 1,000 \\ 4 \times 200 \\ 4 \times 10 \\ 4 \times 4 \end{array}$	$\begin{array}{r} 1,000 \\ 200 \\ 10 \\ + 4 \\ \hline 1,214 \end{array}$
---	--	--



Guided Practice



Determine the quotient using the partial quotients algorithm.

1. $684 \div 2 = \underline{\hspace{2cm}}$

$\begin{array}{r} 2 \overline{) 684} \\ - 600 \\ \hline 84 \\ - 80 \\ \hline \end{array}$	$\begin{array}{l} 2 \times 300 \\ 2 \times 40 \end{array}$	$\begin{array}{r} 300 \\ 40 \end{array}$
---	--	--

2. $4,266 \div 3 = \underline{\hspace{2cm}}$

$\begin{array}{r} 3 \overline{) 4,266} \\ - 3,000 \\ \hline 1,266 \\ - 1,200 \\ \hline 66 \end{array}$	$\begin{array}{l} 3 \times 1,000 \\ 3 \times 400 \\ 3 \times 20 \end{array}$	$\begin{array}{r} 1,000 \\ 400 \\ 20 \end{array}$
--	--	---



Guided Practice



Determine the quotient using partial quotients algorithm.

3. $6,930 \div 5 =$ _____

$$\begin{array}{r}
 5 \overline{) 6,930} \\
 - 5,000 \\
 \hline
 1,930 \\
 - 1,500 \\
 \hline
 430 \\
 - 400 \\
 \hline
 30 \\
 - 25 \\
 \hline
 5
 \end{array}$$

5×1000
 5×300

$1,000$
 300

4. $4,856 \div 4 =$ _____

$$\begin{array}{r}
 \\
 \hline

 \end{array}$$



Check



Determine the quotient using the partial quotients algorithm.

$3,570 \div 5 =$ _____

Dividing Three-Digit Dividends by Two-Digit Divisors Without Remainders

ML 4.11



Modeled Review

Name: Han

Determine the quotient using partial quotients.

$$594 \div 22 = \underline{27}$$

$\begin{array}{r} 22 \overline{) 594} \\ - 440 \\ \hline 154 \\ - 110 \\ \hline 44 \\ - 44 \\ \hline 0 \end{array}$	$\begin{array}{r} 22 \times 20 \\ 22 \times 5 \\ 22 \times 2 \end{array}$	$\begin{array}{r} 20 \\ 5 \\ + 2 \\ \hline 27 \end{array}$
---	---	--

$$22 \times 10 = 220.$$

I could use this partial product, but
 $22 \times 20 = 440$ and that is closer to
 the dividend.



Guided Practice



Determine the quotient using partial quotients.

1. $154 \div 14 = \underline{\hspace{2cm}}$

$\begin{array}{r} 14 \overline{) 154} \\ - 140 \\ \hline 14 \\ - \\ \hline \end{array}$	$\begin{array}{r} 14 \times 10 \\ 14 \times \\ 14 \times \end{array}$	$\begin{array}{r} 10 \\ + \\ \hline \end{array}$
---	---	--

2. $980 \div 70 = \underline{\hspace{2cm}}$

$\begin{array}{r} 70 \overline{) 980} \\ - 700 \\ \hline \end{array}$	$\begin{array}{r} 70 \times 10 \\ 70 \times \end{array}$	$\begin{array}{r} 10 \\ + \\ \hline \end{array}$
--	---	--



Guided Practice



Determine the quotient using partial quotients.

3. $902 \div 22 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 22 \overline{) 902} \\ - 660 \\ \hline \end{array}$$

22×30

30

3	0
+	

4. $408 \div 24 = \underline{\hspace{2cm}}$

5. $732 \div 61 = \underline{\hspace{2cm}}$

6. $611 \div 47 = \underline{\hspace{2cm}}$



Check



Determine the quotient using partial quotients.

$345 \div 23 = \underline{\hspace{2cm}}$

Dividing Four-Digit Dividends by Two-Digit Divisors Without Remainders

ML 4.12



Modeled Review

Name: Jack

Determine the quotient.

$$5,676 \div 12 = \underline{473}$$

$ \begin{array}{r} 12 \overline{) 5,676} \\ \underline{- 4,800} \\ 876 \\ \underline{- 840} \\ 36 \\ \underline{- 36} \\ 0 \end{array} $	$ \begin{array}{l} 12 \times 400 \\ 12 \times 70 \\ 12 \times 3 \end{array} \left. \vphantom{\begin{array}{l} 12 \times 400 \\ 12 \times 70 \\ 12 \times 3 \end{array}} \right\} 473 $
--	---



Guided Practice



Determine the quotient.

1. $8,640 \div 18 = \underline{\hspace{2cm}}$

2. $9,801 \div 27 = \underline{\hspace{2cm}}$

$ \begin{array}{r} 18 \overline{) 8,640} \\ \underline{- 7,200} \\ 1,440 \\ \underline{- 1,440} \\ 0 \end{array} $	$ \begin{array}{l} 18 \times 400 \\ 18 \times 80 \end{array} \left. \vphantom{\begin{array}{l} 18 \times 400 \\ 18 \times 80 \end{array}} \right\} \boxed{} $
--	---

$ \begin{array}{r} 27 \overline{) 9,801} \\ \underline{- 8,100} \\ 1,701 \\ \underline{- 1,620} \\ \boxed{} \boxed{} \\ \boxed{} \boxed{} \\ \boxed{} \end{array} $	$ \begin{array}{l} 27 \times 300 \\ 27 \times 60 \\ 27 \times \boxed{} \end{array} \left. \vphantom{\begin{array}{l} 27 \times 300 \\ 27 \times 60 \\ 27 \times \end{array}} \right\} \boxed{} $
---	--



Guided Practice



Determine the quotient.

3. $7,488 \div 24 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 24 \overline{)7,488} \\ - 7,200 \\ \hline 288 \\ - 240 \\ \hline 48 \\ - 48 \\ \hline 0 \end{array}$$

$$\begin{array}{l} 24 \times \boxed{} \\ \boxed{} \times \boxed{} \end{array} \quad \left. \begin{array}{l} \end{array} \right\} \boxed{}$$

4. $7,920 \div 12 = \underline{\hspace{2cm}}$

$$12 \overline{)7,920}$$

5. $9,408 \div 16 = \underline{\hspace{2cm}}$

$$16 \overline{)9,408}$$

6. $8,670 \div 15 = \underline{\hspace{2cm}}$



Check



Determine the quotient.

$6,480 \div 15 = \underline{\hspace{2cm}}$

Dividing Using Partial Quotients

ML 4.13



Modeled Review

Name: Priya

Determine the quotient.

$$8,760 \div 24 = 365$$

24	$\overline{) 8760}$		
	$- 4800$	24×200	
	3960		200
	$- 2400$	24×100	100
	1560		20
	$- 480$	24×20	20
	1080		20
	$- 480$	24×20	$+ 5$
	600		365
	$- 480$	24×20	
	120		
	$- 120$	24×5	
	0		

Name: Diego

Determine the quotient.

$$8,760 \div 24 = 365$$

24	$\overline{) 8760}$		
	$- 7200$	24×300	300
	1560		20
	$- 1440$	24×60	$+ 5$
	120		365
	$- 120$	24×5	
	0		



Guided Practice



Determine the quotient.

1. $144 \div 4 = \underline{\hspace{2cm}}$

4	$\overline{) 144}$		
	$- 120$	4×30	
	24		30
	$- \square \square$		$+ \square$
	\square		\square

2. $625 \div 5 = \underline{\hspace{2cm}}$

5	$\overline{) 625}$		
	$- 500$	5×100	
	125		
	$- \square \square \square$		$\square \square \square$
	$\square \square$		$+ \square$
	$\square \square$		$\square \square$
	\square		



Guided Practice



Determine the quotient.

3. $390 \div 15 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 15 \overline{) 390} \\ \underline{- 300} \\ 90 \\ \underline{- 90} \\ 0 \end{array}$$

$15 \times 20 =$

$$\begin{array}{r} 20 \\ + \\ \hline \end{array}$$

4. $5,500 \div 25 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 25 \overline{) 5,500} \\ \underline{- 5,000} \\ 500 \\ \underline{- 500} \\ 0 \end{array}$$

$25 \times 200 =$

$$\begin{array}{r} 200 \\ + \\ \hline \end{array}$$

5. $3,080 \div 14 = \underline{\hspace{2cm}}$

6. $8,840 \div 20 = \underline{\hspace{2cm}}$



Check



Determine the quotient.

$5,265 \div 15 = \underline{\hspace{2cm}}$

Determining Missing Side Lengths in Area and Volume Problems

ML 4.14

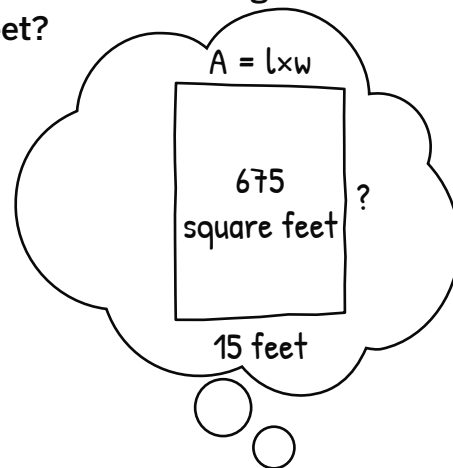


Modeled Review

Name: Santiago

A rectangular garden has an area of 675 square feet and a length of 15 feet. What is the width of the garden, in feet?

$$\begin{array}{r}
 15 \overline{) 675} \\
 \underline{- 600} \\
 75 \\
 \underline{- 75} \\
 0
 \end{array}
 \quad
 \begin{array}{l}
 15 \times 40 \\
 15 \times 5
 \end{array}
 \quad
 \begin{array}{r}
 40 \\
 + 5 \\
 \hline
 45
 \end{array}$$

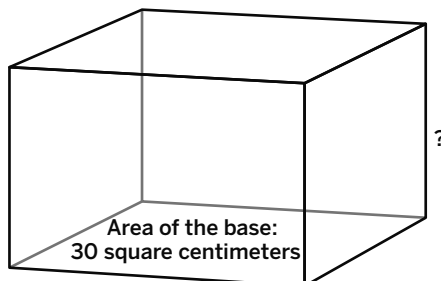
answer: 45 feet

Guided Practice



Determine the missing height of the prism in feet, using $V = B \times h$.

- A rectangular prism has a volume of 1,050 cubic centimeters. The area of the base is 30 square centimeters. What is the height of the prism, in centimeters?



$V = 1,050$ cubic centimeters

$$\begin{array}{r}
 30 \overline{) 1,050} \\
 \underline{- 900} \\
 150 \\
 \underline{- 150} \\
 0
 \end{array}
 \quad
 \begin{array}{l}
 30 \times 30 \\
 \boxed{} \\
 \boxed{} \\
 \boxed{}
 \end{array}
 \quad
 \begin{array}{r}
 30 \\
 + \boxed{} \\
 \hline
 \boxed{}
 \end{array}$$

answer: _____ centimeters



Guided Practice



Determine the missing dimension in each problem, using $A = b \times h$ or $V = B \times h$.

2. A rectangular garden has an area of 1,272 square feet and a width of 53 feet. What is the length of the garden, in feet?

answer: _____

3. A rectangular prism has a volume of 854 cubic feet. The area of the base is 61 square feet. What is the height of the prism in feet?

answer: _____



Check



A rectangular garden has an area of 725 square feet and a length of 25 feet. What is the width of the garden, in feet?

answer: _____

Solving Division Story Problems and Interpreting Answers

ML 4.15



Modeled Review

Name: Avery

Diego has 540 feet of ribbon. He cuts it into 15 equal pieces for his classmates. What is the length of each ribbon?

$$\begin{array}{r}
 15 \overline{) 540} \\
 \underline{- 450} \\
 90 \\
 \underline{- 90} \\
 0
 \end{array}
 \quad
 \begin{array}{l}
 15 \times 30 \\
 15 \times 6
 \end{array}
 \quad
 \begin{array}{r}
 30 \\
 + 6 \\
 \hline
 36
 \end{array}$$

answer: 36 feet

Guided Practice



Determine the amount of ribbon each student will receive.

- 10 students are sharing 210 feet of ribbon equally. How many feet of ribbon does each student receive?

$$\begin{array}{r}
 10 \overline{) 210} \\
 \underline{- 200} \\
 10 \\
 \underline{- 10} \\
 0
 \end{array}
 \quad
 \begin{array}{l}
 10 \times 20 \\
 \boxed{}
 \end{array}
 \quad
 \begin{array}{r}
 20 \\
 + \boxed{} \\
 \hline
 \boxed{}
 \end{array}$$

answer: feet



Guided Practice



Determine the amount of ribbon each student will receive.

2. 11 students are sharing 242 feet of ribbon equally. How many feet of ribbon does each student receive?

answer: _____

3. 12 students are sharing 384 feet of ribbon equally. How many feet of ribbon does each student receive?

answer: _____



Check



Jada has 375 feet of ribbon. She cuts it into 15 equal pieces for her classmates. What is the length of each piece?

answer: _____

Solving Division Story Problems and Interpreting Answers With Remainders

ML 4.16



Modeled Review

Name: Han

Dylan has 1,081 feet of ribbon to make bows. Each bow uses 25 feet of ribbon. How many bows can Dylan make? Does he have any leftover ribbon?

$$\begin{array}{r}
 25 \overline{) 1,081} \\
 \underline{-1,000} \quad 25 \times 40 \quad 40 \\
 81 \\
 \underline{-75} \quad 25 \times 3 \quad + 3 \\
 6 \quad 43
 \end{array}$$

Number of bows: 43 Leftover ribbon: 6 feet



Guided Practice



Determine how many bows can be made with the ribbon and if there is any leftover ribbon.

- Avery has 245 feet of ribbon to make bows. Each bow uses 15 feet of ribbon. How many bows can Avery make? Does she have any leftover ribbon?

$$\begin{array}{r}
 15 \overline{) 245} \\
 \underline{-150} \quad 15 \times 10 \quad 10 \\
 95 \\
 \underline{-90} \quad \square \quad + \quad \begin{array}{|c|} \hline 6 \\ \hline \end{array} \\
 \square \quad \square
 \end{array}$$

Number of bows: _____ Leftover ribbon: _____ feet



Guided Practice



Determine how many bows can be made with the ribbon and if there is any leftover ribbon.

2. Jack has 1,022 feet of ribbon to make bows. Each bow uses 12 feet of ribbon. How many bows can Jack make? Does he have any leftover ribbon?

Number of bows: _____ Leftover ribbon: _____

3. Jada has 1,013 feet of ribbon to make bows. Each bow uses 22 feet of ribbon. How many bows can Jada make? Does she have any leftover ribbon?

Number of bows: _____ Leftover ribbon: _____



Check



Santiago has 1,124 feet of ribbon to make bows. Each bow uses 20 feet of ribbon. How many bows can Santiago make? Does he have any leftover ribbon?

Number of bows: _____ Leftover ribbon: _____

Selecting Equations With Parentheses to Represent Multi-Step Story Problems

ML 4.17



Modeled Review

Name: Maya

Which equation represents the story problem?

A school orders 156 whiteboard markers each month to be split evenly between 12 teachers. How many markers does each teacher receive after 10 months?

A. $(156 \times 12) \div 10 = ?$

B. $(156 \div 12) \div 10 = ?$

C. $(156 \div 10) \times 12 = ?$

☒ D. $(156 \div 12) \times 10 = ?$



Guided Practice



For Problems 1 and 2, select an expression that matches the problem.

1. A school purchases 24 packs of paper each month to split evenly between 3 printers. How many packs of paper are purchased for each printer after 4 months?

A. $(24 \div 3) \times 4$

B. $(24 \div 4) \times 3$

2. Twice a year, a school purchases 80 packs of pencils for 8 classrooms. How many packs of pencils does each classroom get per year?

A. $(80 \times 2) \div 8$

B. $(8 \times 2) \times 80$



Guided Practice



For Problems 3–5, select the equation that represents the problem.

3. A school purchases 20 new books for the class library that are split between 5 bookshelves. If the school purchases books 4 times a year, how many books are on each bookshelf at the end of the year?

A. $(20 \times 5) \div 4 = ?$

B. $(20 \div 5) \times 4 = ?$

C. $(20 \div 5) \div 4 = ?$

D. $(20 \div 4) \times 5 = ?$

4. Three times a year, a school purchases 200 erasers for 12 classrooms. How many erasers does each classroom receive for the entire year?

A. $(200 \div 12) \div 3 = ?$

B. $(200 \div 3) \times 12 = ?$

C. $(200 \times 12) \div 3 = ?$

D. $(200 \times 3) \div 12 = ?$

5. A teacher purchases 125 highlighters for 25 students. If she purchases that same amount twice during the year, how many highlighters does each student receive?

A. $(125 \times 25) \div 2 = ?$

B. $(125 \div 2) \times 25 = ?$

C. $(125 \div 25) \times 2 = ?$

D. $(125 \div 2) \div 25 = ?$



Check



Which equation represents the story problem?

A principal purchases 75 stickers to split evenly between 5 teachers. If she purchases stickers three times a year, how many stickers does each teacher receive by the end of the year?

A. $(75 \div 5) \times 3 = ?$

B. $(75 \times 5) \div 3 = ?$

C. $(75 \div 3) \times 5 = ?$

D. $(75 \div 5) \div 3 = ?$

Interpreting and Comparing Written and Numerical Expressions

ML 4.18



Modeled Review

Name: Han

Without evaluating, complete the comparison using $<$, $>$, or $=$.

700 divided by 100 is less than
700 divided by 10.

$$(700 \div 100) + 30 \text{ } \underline{<} \text{ } (700 \div 10) + 30$$



Guided Practice



Match each written expression with a numerical expression that represents it.

1.

Two less than the quotient of 925 and 5.

$$2 \times (925 \times 5)$$

Double the product of 925 and 5.

$$(925 \div 5) - 2$$

2.

Two more than the product of 925 and 5.

$$(5 - 2) \times 925$$

The difference between 925 and 5, divided by 2.

$$(925 - 5) \div 2$$

The difference between 5 and 2, multiplied by 925.

$$2 + (925 \times 5)$$



Guided Practice



3. Without evaluating, complete the comparison using $<$, $>$, or $=$.

$$100 \div 10 \quad \underline{\hspace{2cm}} \quad 50 \div 5$$

$$7 \times (1,720 + 523) \quad \underline{\hspace{2cm}} \quad 3 \times (1,720 + 523)$$

$$(1,500 \div 10) + 5 \quad \underline{\hspace{2cm}} \quad (1,500 \div 100) + 5$$

$$3 \times (545 - 400) \quad \underline{\hspace{2cm}} \quad (3 \times 545) - 400$$

$$2 + (725 - 200) \quad \underline{\hspace{2cm}} \quad 2 + (725 + 200)$$



Check



Without evaluating, complete the comparison using $<$, $>$, or $=$.

1. $(600 \div 100) + 20 \quad \underline{\hspace{2cm}} \quad (20 \div 10) + 6$

2. $2 \times (320 - 200) \quad \underline{\hspace{2cm}} \quad (2 \times 320) - 200$

Representing Products With Prime Factors

ML 4.19

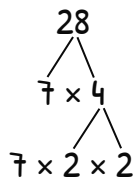


Modeled Review

Name: Jack

Represent the product as a multiplication expression using only its prime factors. Show your thinking.

Product: 28

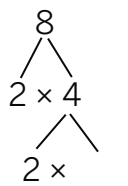
expression: $7 \times 2 \times 2$ 

Guided Practice

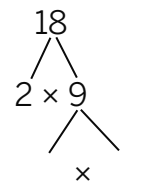


Represent the product as a multiplication expression using only its prime factors.

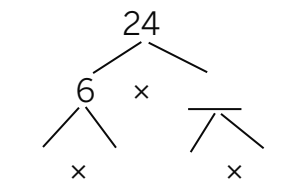
1. Product: 8

expression: $2 \times \underline{\quad} \times \underline{\quad}$

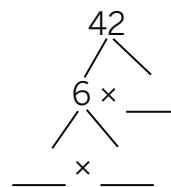
2. Product: 18

expression: $2 \times \underline{\quad} \times \underline{\quad}$

3. Product: 24

expression: $2 \times \underline{\quad} \times \underline{\quad} \times \underline{\quad}$

4. Product: 42

expression: $\underline{\quad} \times \underline{\quad} \times \underline{\quad}$

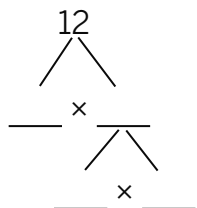


Guided Practice



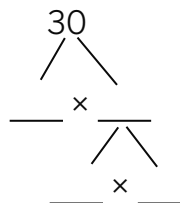
Represent the product as a multiplication equation using only its prime factors. Show your thinking.

5. Product: 12



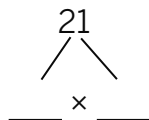
$$2 \times \underline{\quad} \times \underline{\quad} = 12$$

6. Product: 30



$$\underline{\quad} \times \underline{\quad} \times \underline{\quad} = 30$$

7. Product: 21



$$\underline{\quad} \times \underline{\quad} = 21$$

8. Product: 16

9. Product: 36

10. Product: 48



Check



Represent the product as a multiplication equation using only its prime factors. Show your thinking.

Product: 20

Unit 5

Mini-Lessons

Representing Decimals on Grids

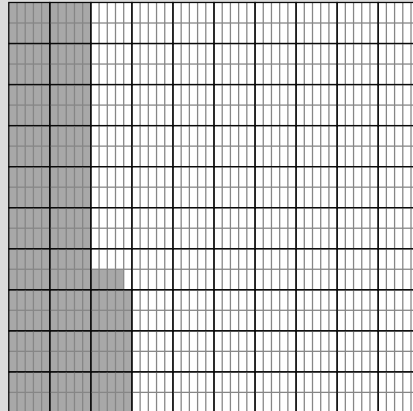
ML 5.02



Modeled Review



The shaded region of the diagram represents 0.234.



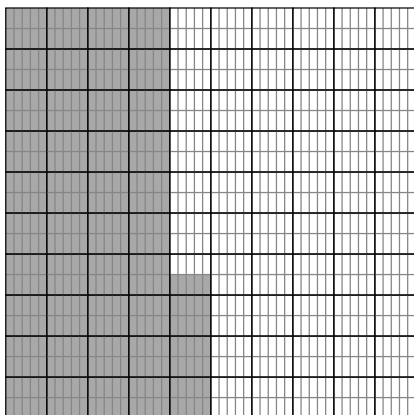
- The 2 shaded columns are each a tenth or 0.1
- The 3 shaded squares are each a hundredth or 0.01.
- The 4 shaded small rectangles are each a thousandth or 0.001.



Guided Practice



1. Each large square represents 1. Fill in the blank to represent the shaded part of the grid.



4 tenths + 3 hundredths + 5 thousandths

43 hundredths + 5 thousandths

_____ thousandths

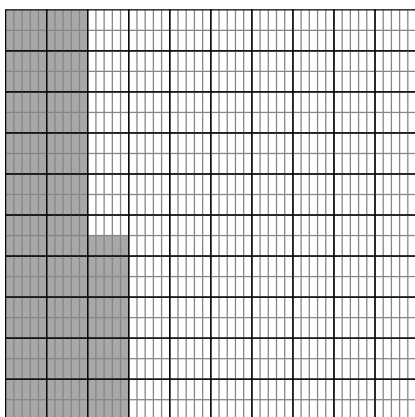


Guided Practice



For Problems 2-3, each large square represents 1. Represent the shaded part as a decimal.

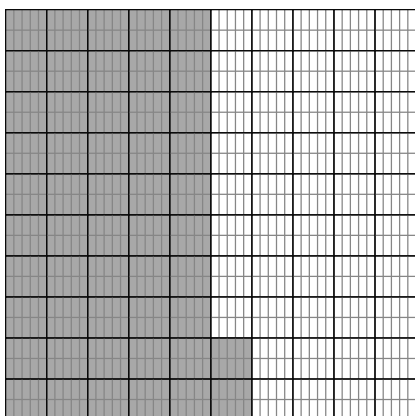
2.



2 tenths + 4 hundredths + 5 thousandths

answer: 0. _____

3.



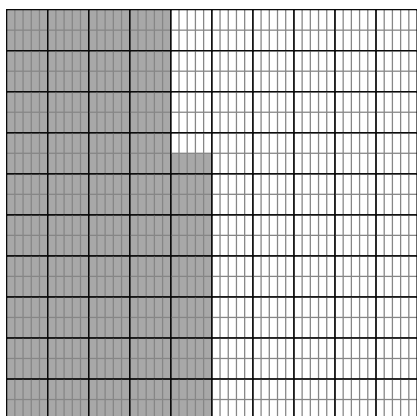
answer: _____



Check



The large square represents 1. Represent the shaded part as a decimal.



answer: _____

Writing Decimals in Expanded Form

ML 5.03



Modeled Review

Name: Dylan

Write each number in expanded form.

1. 23.5

Expanded form: $(2 \times 10) + (3 \times 1) + (5 \times 0.1)$

2. 0.435

Expanded form: $(4 \times 0.1) + (3 \times 0.01) + (5 \times 0.001)$ 

Guided Practice



1. Write each number in expanded form.

Standard form	Expanded form
0.25	$(2 \times 0.1) + (5 \times 0.01)$
1.45	$(1 \times 1) + (4 \times 0.1) + \underline{\hspace{2cm}}$
12.35	$(1 \times 10) + (2 \times 1) + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$
0.165	$(1 \times 0.1) + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

Describing the Relationship Between Place Values

ML 5.04



Modeled Review

Name: Han

Describe the relationship between the values of the digits.

1. What is the value of 4 in 3,415? 400

What is the value of 4 in 4,231? 4,000

How are the values related?

$400 \times 10 = 4,000$, so 4,000 is 10 times the value of 400.

$\times 10$

thousands	hundreds	tens	ones
	4	0	0
4	0	0	0

2. What is the value of 5 in 5,270? 5,000

What is the value of 5 in 9,531? 500

How are the values related?

$5,000 \times \frac{1}{10} = 500$, so 500 is $\frac{1}{10}$ times the value of 5,000.

$\times \frac{1}{10}$

thousands	hundreds	tens	ones
5	0	0	0
	5	0	0



Guided Practice



Describe the relationship between the values of the digits.

1. What is the value of 6 in 63? 60

What is the value of 6 in 674? 600

Complete the sentence to show how the values of the digits are related.

$60 \times 10 =$ _____, so _____ is 10 times the value of _____.

2. What is the value of 9 in 9,876? 9,000

What is the value of 9 in 1,921? _____

Complete the sentence to show how the values of the digits are related.

$9,000 \times \frac{1}{10} =$ _____, so _____ is $\frac{1}{10}$ times the value of _____.



Guided Practice



Describe the relationship between the values of the digits.

3. What is the value of 4 in 54? _____

What is the value of 4 in 1.4? 0.4

How are the values related?

_____ $\times \frac{1}{10} =$ _____, so _____ is $\frac{1}{10}$ times the value of _____.

4. What is the value of 2 in 123? _____

What is the value of 2 in 982? _____

How are the values related?

5. What is the value of 4 in 763.4? _____

What is the value of 4 in 34.1? _____

How are the values related?



Check



Describe the relationship between the values of the digits.

1. What is the value of 2 in 1,254? _____

What is the value of 2 in 1,320? _____

How are the values related?

2. What is the value of 3 in 2.73? _____

What is the value of 3 in 1.3? _____

How are the values related?

Locating Decimals on Number Lines

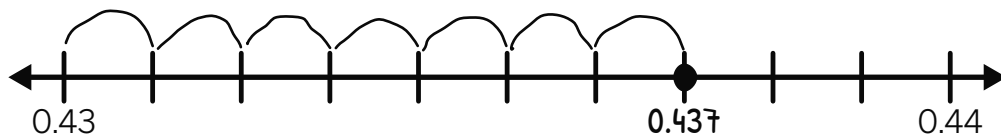
ML 5.05



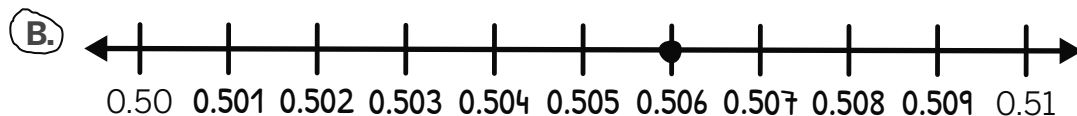
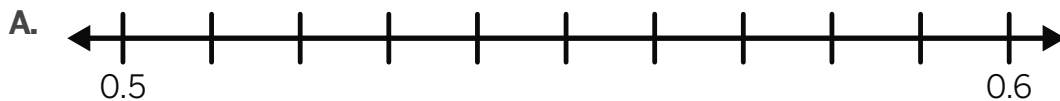
Modeled Review

Name: Diego

1. Locate and label 0.437 on the number line.



2. Which number line could you use to precisely locate and label 0.506 on a tick mark?

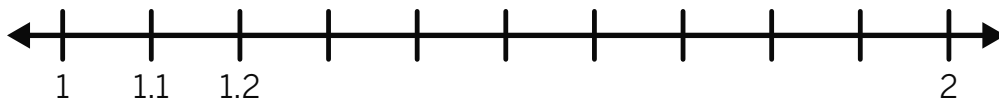


Guided Practice

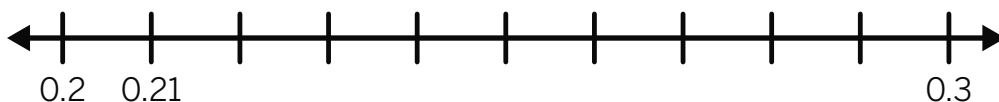


Locate and label each value on the number line.

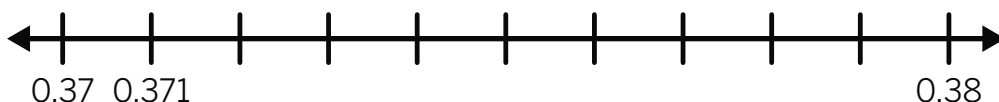
1. 1.6



2. 0.25



3. 0.376

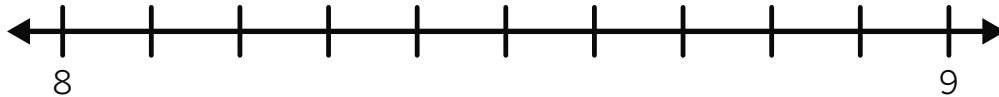




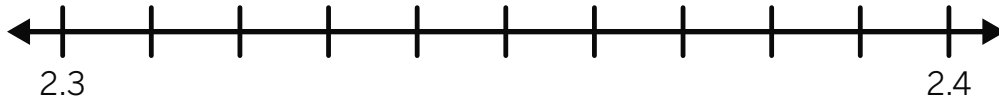
Guided Practice



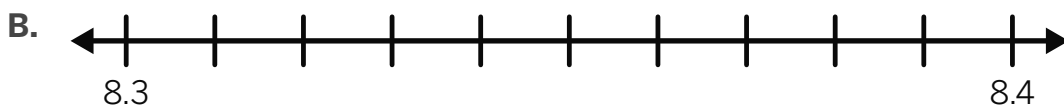
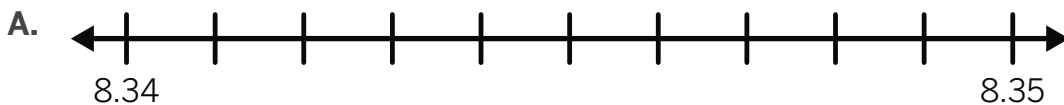
4. Locate and label 8.7 on the number line.



5. Locate and label 2.34 on the number line.



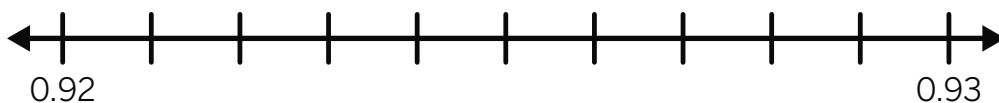
6. Which number line could you use to precisely locate and label 8.346 on a tick mark?



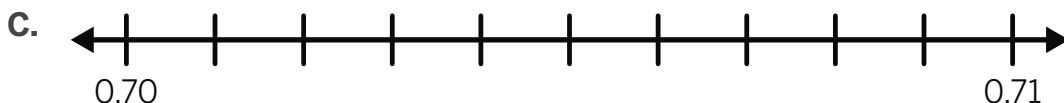
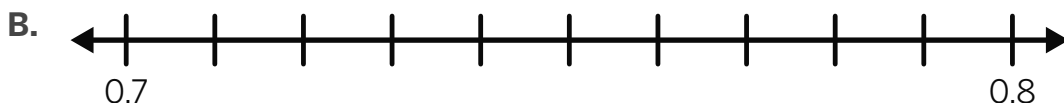
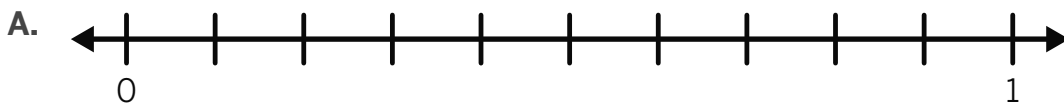
Check



1. Locate and label 0.924 on the number line.



2. Which number line could you use to precisely locate and label 0.703 on a tick mark?



Comparing Decimals to the Thousandths

ML 5.06



Modeled Review

Name: ClareUse $<$, $>$, or $=$ to compare the numbers. Show your thinking.

$$3.402 \text{ } \underline{<} \text{ } 3.46$$

3	4	0	2
3	4	6	0
same	same	more	



Guided Practice

Use $<$, $>$, or $=$ to compare the numbers. Show your thinking.

1. $0.62 \text{ } \underline{\hspace{1cm}} \text{ } 0.7$

		0	6	2	
		0	7	0	

2. $21.3 \text{ } \underline{\hspace{1cm}} \text{ } 21.301$

	2	1	3	0	0

3. $78.04 \text{ } \underline{\hspace{1cm}} \text{ } 78.023$

	7	8	0	4	0

4. $0.023 \text{ } \underline{\hspace{1cm}} \text{ } 0.107$

5. $0.401 \text{ } \underline{\hspace{1cm}} \text{ } 0.471$

6. $0.910 \text{ } \underline{\hspace{1cm}} \text{ } 0.91$



Guided Practice



Use $<$, $>$, or $=$ to compare the numbers. Show your thinking.

7. 4.013 _____ 4.031

8. 21.006 _____ 21.011

9. 0.120 _____ 0.12

10. 0.005 _____ 0.006

11. 2.18 _____ 2.1



Check



Use $<$, $>$, or $=$ to compare the numbers. Show your thinking.

1. 8.75 _____ 8.708

2. 0.4 _____ 0.43

Rounding Decimals

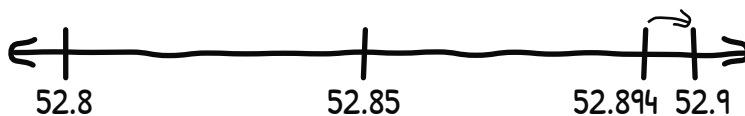
ML 5.07



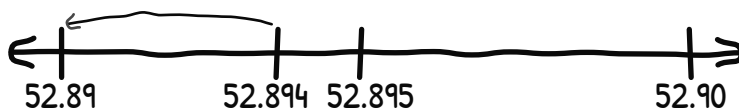
Modeled Review

Name: Jada

1. Round 52.894 to the nearest tenth. 52.9



2. Round 52.894 to the nearest hundredth. 52.89

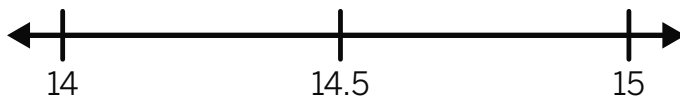


Guided Practice



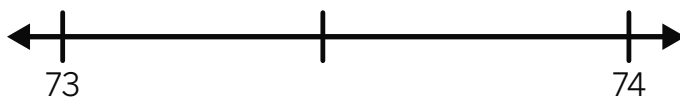
For Problems 1–2, round each decimal to the nearest whole number.

1. Round 14.3 to the nearest whole number.



answer: _____

2. Round 73.68 to the nearest whole number.



answer: _____

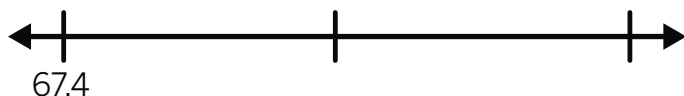


Guided Practice



For Problems 3–6, round each decimal to the given place value.

3. Round 67.419 to the nearest tenth.



answer: _____

4. Round 38.294 to the nearest tenth.



answer: _____

5. Round 47.823 to the nearest hundredth.



answer: _____

6. Round 45.782 to the nearest tenth. Draw a number line if it is helpful.

answer: _____



Check



For Problems 1–2, round each decimal to the given place value. Draw a number line if it is helpful.

1. Round 23.476 to the nearest tenth.

answer: _____

2. Round 23.476 to the nearest hundredth.

answer: _____

Rounding Times Given in Seconds

ML 5.08



Modeled Review

Name: Jack

Avery ran 100 meters twice and recorded her results. Round each time to the different place values shown in the table.

	Nearest second	Nearest tenth of a second	Nearest hundredth of a second
15.205 seconds	15	15.2	15.21
12.617 seconds	13	12.6	12.62



Guided Practice



- Han ran 50 meters five times and recorded his results. Round each time to the different place values shown in the table.

	Nearest second	Nearest tenth of a second	Nearest hundredth of a second
7.348 seconds		7.3	7.35
8.564 seconds		8. _	8.56
7.675 seconds			7.68
8.132 seconds			8.1 _
8.287 seconds			



Guided Practice



2. The table shows the all-around times from a track meet for a 100-meter race. Round each score to the different place values shown in the table.

	Nearest second	Nearest tenth of a second	Nearest hundredth of a second
11.241 seconds			
14.315 seconds			
12.894 seconds			
14.872 seconds			
13.082 seconds			
15.834 seconds			
12.345 seconds			
13.658 seconds			
15.303 seconds			



Check



Santiago ran 100 meters twice and recorded his results. Round each time to the different place values shown in the table.

	Nearest second	Nearest tenth of a second	Nearest hundredth of a second
15.427 seconds			
13.521 seconds			

Representing Decimal Addition and Subtraction

ML 5.09



Modeled Review



$$4.95 - 2.56$$

Steps	Work
Step 1: Decompose the subtrahend.	$2.56 = 2 + 0.5 + 0.06$
Step 2: Subtract the ones.	$4.95 - 2 = 2.95$
Step 3: Subtract the tenths.	$2.95 - 0.5 = 2.45$
Step 4: Subtract the hundredths.	$2.45 - 0.06 = 2.39$



Guided Practice



For Problems 1–4, determine the sum or difference.

1. $2.3 + 5.6$

add ones: $2 + 5 = 7$

add tenths: $0.3 + 0.6 = \underline{\hspace{2cm}}$

$7 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2. $3.5 - 1.4$

$1.4 = 1 + 0.4$

subtract ones: $3.5 - 1 = \underline{\hspace{2cm}}$

subtract tenths: $2.5 - 0.4 = \underline{\hspace{2cm}}$

$3.5 - 1.4 = \underline{\hspace{2cm}}$

3. $4.71 + 1.26$

add ones: $4 + 1 = \underline{\hspace{2cm}}$

add tenths: $\underline{\hspace{2cm}}$

add hundredths: $\underline{\hspace{2cm}}$

$4.71 + 1.26 = \underline{\hspace{2cm}}$

4. $3.25 - 2.1$

$2.1 = 2 + 0.1$

subtract ones: $3.25 - 2 = \underline{\hspace{2cm}}$

subtract tenths: $\underline{\hspace{2cm}}$

$3.25 - 2.1 = \underline{\hspace{2cm}}$



Guided Practice



For Problems 5–10, determine the sum or difference.

5. $2.25 + 2.43$

ones: _____

tenths: _____

hundredths: _____

$2.25 + 2.43 =$ _____

6. $5.45 - 2.36$

ones: _____

tenths: _____

hundredths: _____

$5.45 - 2.36 =$ _____

7. $5.45 + 2.33$

8. $4.75 - 1.56$

9. $1.53 + 0.21$

10. $1.92 - 0.52$



Check



For Problems 1 and 2, determine the sum or difference.

1. $2.55 + 0.32$

2. $1.68 - 0.24$

Adding Decimals

ML 5.10



Modeled Review

Name: Priya

Determine the sum. Show your thinking.

$$5.3 + 14.78 = \underline{20.08}$$

$$\begin{array}{r} 11 \\ 14.78 \\ + 5.30 \\ \hline 20.08 \end{array}$$



Guided Practice



Determine the sum.

1. $25.18 + 1.5 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 25.18 \\ + 1.50 \\ \hline \square\square.\square\square \end{array}$$

2. $13.66 + 1.45 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 13.66 \\ + 1.45 \\ \hline \square\square.\square\square \end{array}$$

3. $72.93 + 4.7 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 72.93 \\ + 4.70 \\ \hline \square\square.\square\square \end{array}$$

4. $51.24 + 9.07 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 51.24 \\ + 9.07 \\ \hline \square\square.\square\square \end{array}$$



Guided Practice



Determine the sum. Show your thinking.

5. $42.61 + 4.3 =$ _____

6. $20.77 + 1.03 =$ _____

7. $36.29 + 7.4 =$ _____

8. $19.58 + 6.41 =$ _____



Check



Determine the sum. Show your thinking.

1. $12.07 + 7.8 =$ _____

2. $42.19 + 3.45 =$ _____

Subtracting Decimals

ML 5.11



Modeled Review

Name: Tristan

Determine the difference. Show your thinking.

$$15.3 - 4.17 = \underline{11.13}$$

$$\begin{array}{r} 2 \\ 5 . \cancel{3} \cancel{0} \\ - 4 . 1 \cancel{7} \\ \hline 1 . 1 3 \end{array}$$



Guided Practice



Determine the difference.

1. $38.96 - 6.5 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 3 8 . 9 6 \\ - 6 . 5 0 \\ \hline \boxed{} \boxed{} . 4 6 \end{array}$$

2. $14.56 - 1.72 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 3 15 \\ 1 \cancel{4} . \cancel{5} 6 \\ - 1 . 7 2 \\ \hline \boxed{} \boxed{} \boxed{} 4 \end{array}$$

3. $2.43 - 0.7 = \underline{\hspace{2cm}}$

$$\begin{array}{r} \boxed{} \boxed{} \\ 2 . 4 3 \\ - 0 . 7 0 \\ \hline \boxed{} \boxed{} \boxed{} \end{array}$$

4. $51.36 - 19.07 = \underline{\hspace{2cm}}$

$$\begin{array}{r} \boxed{} \boxed{} \boxed{} \boxed{} \\ 5 1 . 3 6 \\ - 1 9 . 0 7 \\ \hline \boxed{} \boxed{} \boxed{} \boxed{} \end{array}$$



Guided Practice



Determine the difference. Show your thinking.

5. $19.58 - 6.41 =$ _____

6. $40.3 - 5.08 =$ _____

7. $13.49 - 9.7 =$ _____

8. $9.72 - 6.54 =$ _____



Check



Determine the difference. Show your thinking.

1. $14.05 - 2.8 =$ _____

2. $42.29 - 3.65 =$ _____

Adding and Subtracting Decimals

ML 5.12



Modeled Review

Name: Han

Determine the sum or difference. Show your thinking.

1. $2.4 + 4.76 = \underline{7.16}$

2. $9.7 - 6.45 = \underline{3.25}$

$$\begin{array}{r} 1 \\ 2.40 \\ + 4.76 \\ \hline 7.16 \end{array}$$

$$\begin{array}{r} 6 \text{ } 10 \\ 9.\cancel{7}\cancel{0} \\ - 6.45 \\ \hline 3.25 \end{array}$$



Guided Practice



Determine the sum. Show your thinking.

1. $8.21 + 0.5 = \underline{\hspace{2cm}}$

2. $41.7 + 11.32 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 8.21 \\ + 0.50 \\ \hline \square\square\square 1 \end{array}$$

$$\begin{array}{r} 1 \\ 41.70 \\ + 11.32 \\ \hline \square\square\square 2 \end{array}$$

3. $9.3 + 0.74 = \underline{\hspace{2cm}}$

4. $35.86 + 19.7 = \underline{\hspace{2cm}}$



Guided Practice



Determine the difference. Show your thinking.

5. $7.8 - 0.45 =$ _____

7	.	8	0
-	0	.	4 5
<hr/>			

6. $31.6 - 14.08 =$ _____

3	1	.	6	0	
-	1	4	.	0	8
<hr/>					

7. $3.49 - 1.7 =$ _____

8. $13.2 - 6.52 =$ _____



Check



Determine the sum or difference. Show your thinking.

1. $17.5 + 3.41 =$ _____

2. $21.4 - 8.75 =$ _____

Solving Real-World Problems Involving Adding and Subtracting Decimals

ML 5.13



Modeled Review

Name: Eva

Clare is baking muffins. She bought a bag of flour for \$3.49 and a bottle of olive oil for \$6.29. She used a \$2.00 coupon. How much did she spend in all?

cost of flour and olive oil:

$$\begin{array}{r} 1 \\ 3.49 \\ + 6.29 \\ \hline 9.78 \end{array}$$

cost after coupon:

$$\begin{array}{r} 9.78 \\ - 2.00 \\ \hline 7.78 \end{array}$$

answer: \$7.78

Guided Practice



Solve the story problem. Show your thinking.

- Han is going camping, and the total weight of the three items he will carry is 32.25 pounds. If his sleeping bag weighs 3.8 pounds and his tent weighs 9.45 pounds, how much does his backpack weigh?

sleeping bag and tent weight:

$$\begin{array}{r} \boxed{} \boxed{} \\ 3.80 \\ + 9.45 \\ \hline \boxed{} \boxed{} \boxed{} \boxed{} \end{array}$$

backpack weight:

answer: _____



Guided Practice



Solve each story problem. Show your thinking.

2. Jack is building a toy track. The total length of his three track pieces is 29.8 inches. If two of the track pieces measure 10.4 inches and 8.35 inches, how long is the third track piece in inches?

two track pieces:

third track piece:

answer: _____

3. Maya loves to go on bike rides. In three weeks, she biked 185.6 miles. She biked 56.2 miles during the first week and 79.4 miles during the second week. How many miles did she bike during the third week?

answer: _____



Check



Solve the story problem. Show your thinking.

Diego hiked three times for a total of 34.8 miles. He covered 7.4 miles on his first hike and 15.3 miles on his second hike. How many miles did Diego hike on his third hike?

answer: _____

Connecting Whole Number and Decimal Multiplication

ML 5.14



Modeled Review

Name: Avery

Determine each product. Show your thinking.

1. $4 \times 3 = \underline{12}$

$4 \times 3 \text{ ones} = 12 \text{ ones} = 12$

2. $4 \times 0.3 = \underline{1.2}$

$4 \times 3 \text{ tenths} = 12 \text{ tenths} = 1.2$

3. $4 \times 0.31 = \underline{1.24}$

$4 \times 31 \text{ hundredths} = 124 \text{ hundredths} = 1.24$

$$\begin{array}{r} 31 \\ \times 4 \\ \hline 124 \end{array}$$



Guided Practice



Determine each product.

1. 5×0.3

$5 \times 3 \text{ tenths} = \underline{\hspace{1cm}} \text{ tenths}$

$5 \times 0.3 = 1.5$

2. 4×0.12

$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \text{ hundredths} = 48 \text{ hundredths}$

$4 \times 0.12 = \underline{\hspace{1cm}}$

3. 2×0.32

$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \text{ hundredths} = 64 \text{ hundredths}$

$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

4. 6×0.40

$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \text{ hundredths} = 240 \text{ hundredths}$

$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$



Guided Practice



Determine each product. Show your thinking.

5. $7 \times 0.2 =$ _____

6. $8 \times 0.3 =$ _____

7. $6 \times 0.5 =$ _____

8. $5 \times 0.9 =$ _____

9. $4 \times 0.15 =$ _____

10. $2 \times 0.51 =$ _____



Check



Determine each product. Show your thinking.

1. $6 \times 0.3 =$ _____

2. $3 \times 0.11 =$ _____

Multiplying Decimals by Whole Numbers

ML 5.15



Modeled Review

Name: Santiago

Determine the product. Show your thinking.

$$4 \times 1.26 = \underline{5.04}$$

$$1.26 = 1 + 0.2 + 0.06$$

$$4 \times 1.26 = (4 \times 1) + (4 \times 0.2) + (4 \times 0.06)$$

$$= 4 + 0.8 + 0.24$$

$$= 5.04$$

$$\begin{array}{r} 1 \\ 4.00 \\ 0.80 \\ + 0.24 \\ \hline 5.04 \end{array}$$



Guided Practice



Determine the product.

1. $5 \times 2.4 = \underline{\hspace{2cm}}$

$$2.4 = 2 + 0.4$$

$$(5 \times 2) + (5 \times 0.4)$$

$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$

2. $3 \times 4.82 = \underline{\hspace{2cm}}$

$$4.82 = 4 + 0.8 + 0.02$$

$$(3 \times 4) + (3 \times 0.8) + (3 \times \underline{\hspace{1cm}})$$

$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$



Guided Practice



Determine the product. Show your thinking.

3. $4 \times 2.89 =$ _____

4. $5 \times 3.61 =$ _____

$2.89 =$ ____ $+$ ____ $+$ ____

$(\text{ } \times \text{ }) + (\text{ } \times \text{ }) + (\text{ } \times \text{ })$

____ $+$ ____ $+$ ____ $=$ _____

5. $3 \times 4.52 =$ _____

6. $2 \times 7.14 =$ _____



Check



Determine the product. Show your thinking.

1. $5 \times 3.47 =$ _____

2. $4 \times 2.83 =$ _____

Multiplying Decimals Less Than 1

ML 5.16

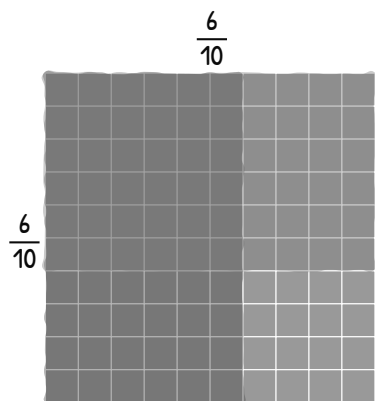


Modeled Review

Name: Jack

Determine the product.

$$0.6 \times 0.6 = \underline{0.36}$$



$$\frac{6}{10} \times \frac{6}{10} = \frac{36}{100} = 0.36$$



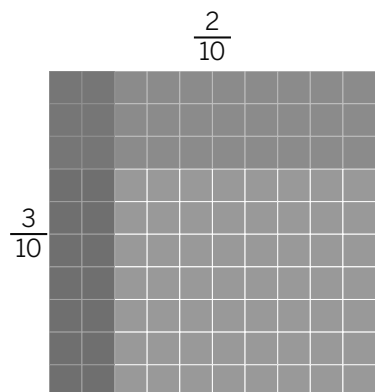
Guided Practice



Determine the product.

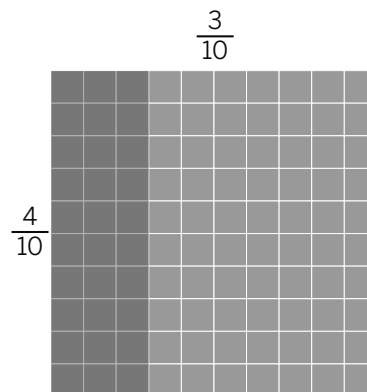
1. $0.3 \times 0.2 = \underline{\hspace{2cm}}$

$$\frac{\boxed{}}{10} \times \frac{\boxed{}}{10} = \frac{\boxed{}}{100} = \underline{\hspace{2cm}}$$



2. $0.4 \times 0.3 = \underline{\hspace{2cm}}$

$$\frac{\boxed{}}{10} \times \frac{\boxed{}}{10} = \underline{\hspace{2cm}}$$





Guided Practice

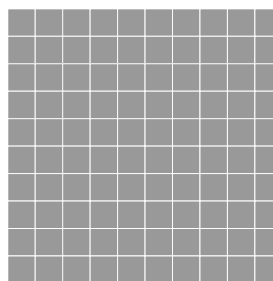
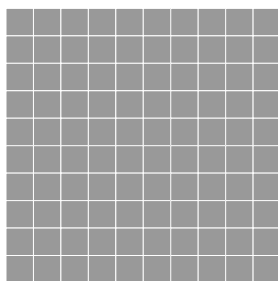


Determine the product.

3. $0.2 \times 0.8 =$ _____

4. $0.3 \times 0.6 =$ _____

— \times — = — = _____



5. $0.5 \times 0.4 =$ _____

6. $0.6 \times 0.4 =$ _____

7. $0.7 \times 0.3 =$ _____

8. $0.8 \times 0.4 =$ _____



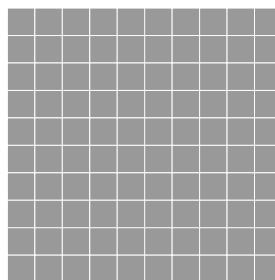
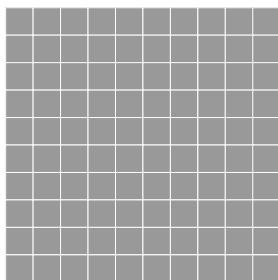
Check



Determine the product. Use a decimal grid if it is helpful.

1. $0.5 \times 0.8 =$ _____

2. $0.3 \times 0.9 =$ _____



Multiplying Two Decimals

ML 5.17

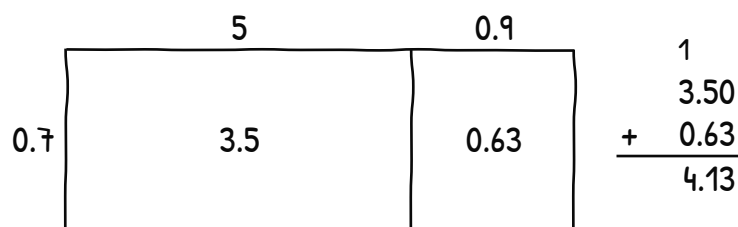


Modeled Review

Name: Maya

Determine the product. Show your thinking.

$$5.9 \times 0.7 = \underline{4.13}$$

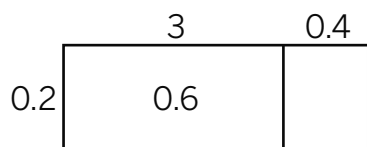


Guided Practice

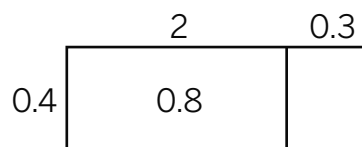


Determine the product.

1. $3.4 \times 0.2 = \underline{\hspace{2cm}}$



2. $2.3 \times 0.4 = \underline{\hspace{2cm}}$





Guided Practice



Determine the product. Show your thinking.

3. $4.2 \times 0.5 =$ _____

	4	0.2
0.5		

4. $5.1 \times 0.2 =$ _____

--	--

5. $6.4 \times 0.6 =$ _____

--

6. $3.6 \times 0.3 =$ _____



Check



Determine the product. Show your thinking.

$8.3 \times 0.6 =$ _____

Multiplying Two Decimals Greater than 1

ML 5.18



Modeled Review

Name: Priya

Determine the product. Show your thinking.

$$14.6 \times 8.2 = \underline{119.72}$$

	14	0.6	
8	112	4.8	$\begin{array}{r} 112.00 \\ 4.80 \\ 2.80 \\ + 0.12 \\ \hline 119.72 \end{array}$
0.2	2.8	0.12	



Guided Practice



Determine the product. Show your thinking.

1. $10.5 \times 2.1 =$ _____

	10	0.5
2	20	1
0.1	1	

2. $10.8 \times 4.3 =$ _____

	10	0.8
4	40	3.2
0.3	3	



Guided Practice



Determine the product. Show your thinking.

3. $10.2 \times 5.6 =$ _____

	10	0.2
5		
0.6		

4. $11.5 \times 7.5 =$ _____

5. $12.7 \times 9.1 =$ _____

6. $14.3 \times 8.6 =$ _____



Check



Determine the product. Show your thinking.

$13.4 \times 8.5 =$ _____

Solving Real-World Problems Involving Multiplying Decimals

ML 5.19



Modeled Review

Name: Tristan

Solve the problem. Show your work.

Han is going to paint his garage with the two cans of paint he found. Can A has 2.2 liters of paint. Can B has 7 times as much paint as Can A. How many total liters of paint does Han have?

answer: 17.6 liters

$$\begin{array}{r}
 7 \begin{array}{|c|c|} \hline 2 & 0.2 \\ \hline 14 & 1.4 \\ \hline \end{array} \\
 14.0 \\
 + 1.4 \\
 \hline
 15.4
 \end{array}
 \qquad
 \begin{array}{r}
 15.4 \\
 + 2.2 \\
 \hline
 17.6
 \end{array}$$



Guided Practice



Solve the problem by completing the steps. Show your thinking.

- Jada is painting her room using 2 cans of paint. Can B has 2.5 liters. Can A has 3 times as much paint as Can B. Jada used 1.5 liters from Can A. How much paint is left in Can A?

answer: _____ liters

Steps	Work
Step 1: Find amount in Can A $3 \times \text{Can B}$	$ \begin{array}{r} 2 \quad 0.5 \\ 3 \begin{array}{ c c } \hline & \\ \hline \end{array} \end{array} $
Step 2: Find amount left in Can A $\text{Can A} - 1.5$	$ \underline{\hspace{2cm}} - 1.5 = \underline{\hspace{2cm}} $



Guided Practice



Solve the problem. Show your work.

2. Dylan has two containers of water. Container A has 3.2 liters of water. Container B has 4 times as much water as Container A. He then added another 2.5 liters of water to Container B. How much water does Dylan have in Container B now?

answer: _____

--	--

3. Santiago has two containers of water. Container B has 4.5 liters of water. Container A has 5 times as much water as Container B. Santiago spilled 6 liters from Container A. How much water is left in Container A?

answer: _____



Check



Solve the problem. Show your work.

Eva is painting her garage using two cans of paint. Can A contains 2.5 liters of paint. Can B has 6 times as much paint as Can A. How much paint does Eva have in total in liters?

answer: _____

Connecting Whole Number and Decimal Division

ML 5.20



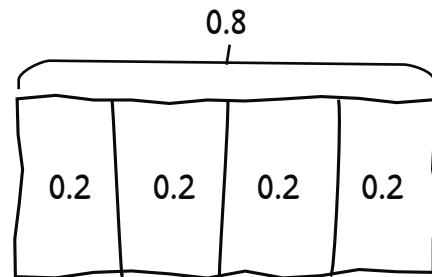
Modeled Review

Name: Diego

Determine the quotient. Show your thinking.

1. $0.8 \div 4 = \underline{0.2}$

8 tenths \div 4 = 2 tenths because $8 \div 4 = 2$



2. $0.3 \div 2 = \underline{0.15}$

3 tenths = 30 hundredths

30 hundredths \div 2 = 15 hundredths because $30 \div 2 = 15$



Guided Practice



Determine the quotient.

1. $0.9 \div 3$

9 tenths \div 3 = 3 tenths

$0.9 \div 3 = \underline{\quad}.\underline{\quad}$

2. $0.4 \div 2$

4 tenths \div 2 = tenths

$0.4 \div 2 = \underline{\quad}.\underline{\quad}$

3. $0.12 \div 3$

12 hundredths \div 3 = hundredths

$0.12 \div 3 = \underline{\quad}$

4. $0.7 \div 2$

0.7 tenths = hundredths

 hundredths \div 2 = hundredths

$0.70 \div 2 = \underline{\quad}$



Guided Practice



Determine the quotient. Show your thinking.

5. $0.6 \div 6 =$ _____

_____ tenths \div _____ = _____ tenth

_____ \div _____ = _____

6. $0.24 \div 4 =$ _____

_____ hundredths \div _____ = _____ hundredths

_____ \div _____ = _____

7. $0.33 \div 3 =$ _____

8. $0.9 \div 2 =$ _____

9. $0.45 \div 5 =$ _____

10. $0.3 \div 6 =$ _____



Check



Determine the quotient. Show your thinking.

1. $0.21 \div 3 =$ _____

2. $0.5 \div 2 =$ _____

Dividing Whole Numbers by Decimals

ML 5.21

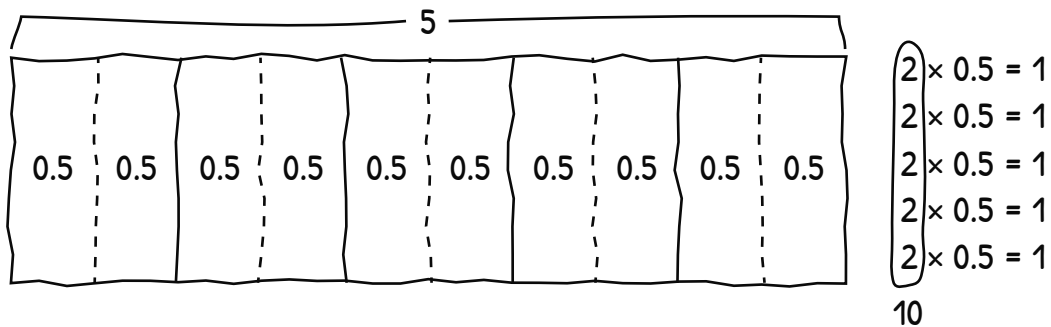


Modeled Review

Name: Clare

Determine the quotient. Show your thinking.

$$5 \div 0.5 = \underline{10}$$



Guided Practice

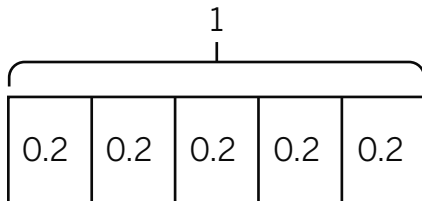


Determine the quotient.

1. $1 \div 0.2 = 5$

$$5 \times 0.2 = 1$$

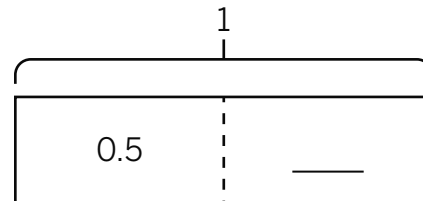
$$1 \div 0.2 = \underline{\quad}$$



2. $1 \div 0.5 = \underline{\quad}$

$$\underline{\quad} \times 0.5 = 1$$

$$1 \div 0.5 = \underline{\quad}$$



3. $5 \div 0.2 = \underline{\quad}$

$$25 \times 0.2 = 5$$

$$5 \div 0.2 = \underline{\quad}$$

4. $4 \div 0.5 = \underline{\quad}$

$$\underline{\quad} \times 0.5 = 4$$

$$4 \div 0.5 = \underline{\quad}$$



Guided Practice



Determine the quotient. Show your thinking.

5. $2 \div 0.25 = \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}} \times 0.25 = 2$

$2 \div 0.25 = \underline{\hspace{2cm}}$

6. $3 \div 0.1 = \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}} \times 0.1 = 3$

$3 \div 0.1 = \underline{\hspace{2cm}}$

7. $4 \div 0.2 = \underline{\hspace{2cm}}$

8. $9 \div 0.5 = \underline{\hspace{2cm}}$

9. $4 \div 0.5 = \underline{\hspace{2cm}}$

10. $3 \div 0.25 = \underline{\hspace{2cm}}$



Check



Determine the quotient. Show your thinking.

1. $3 \div 0.2 = \underline{\hspace{2cm}}$

2. $4 \div 0.25 = \underline{\hspace{2cm}}$

Dividing Decimals and Whole Numbers

ML 5.22



Modeled Review

Name: Jada

Write a division expression to represent the story problem. Then solve the problem. Show your thinking.

4 friends equally shared a bag of trail mix that weighed 0.2 pound. How many pounds of trail mix did each friend receive?

division expression: $0.2 \div 4$

$$0.2 \div 4$$

2 tenths = 20 hundredths

$$20 \text{ hundredths} \div 4 = 5 \text{ hundredths}$$

answer: 0.05 pound of trail mix

Guided Practice



Circle the division expression that represents each story problem. Explain your thinking.

1. Diego has 0.8 pound of clay to make 4 mugs. He uses the same amount of clay to make each mug. How many pounds of clay does Diego use to make each mug?

$$0.8 \div 4$$

$$4 \div 0.8$$

I know this because _____

2. Diego buys 3 pounds of soil to fill flower pots. Each flower pot needs 0.9 pound of soil. How many flower pots can Diego fill with soil?

$$3 \div 0.9$$

$$0.9 \div 3$$

I know this because _____



Guided Practice



Write a division expression to represent the story problem. Then solve the problem. Show your thinking.

3. Diego used 0.45 pound of dough to make 3 equal-sized loaves of bread. How many pounds of dough did he use to make each loaf of bread?

division expression: $0.45 \div \underline{\hspace{2cm}}$

answer: $\underline{\hspace{2cm}}$ pound of dough per loaf

4. Diego has 4 pounds of fish. He wants to divide it into equal portions of 0.5 pound each. How many portions will Diego have?

division expression: $\underline{\hspace{4cm}}$

answer: $\underline{\hspace{4cm}}$



Check



Write a division expression to represent the story problem. Then solve the problem. Show your thinking.

1. Diego has 5 pounds of berries that he wants to split into servings of 0.25 pound. How many servings can Diego make?

division expression: $\underline{\hspace{4cm}}$

answer: $\underline{\hspace{4cm}}$

2. Diego has 0.35 pound of dough to make 5 pretzels. If he wants all the pretzels to weigh the same, how much will each pretzel weigh?

division expression: $\underline{\hspace{4cm}}$

answer: $\underline{\hspace{4cm}}$

Dividing Decimals by 1 Tenth and 1 Hundredth

ML 5.23



Modeled Review

Name: Avery**Determine the quotient. Show your thinking.**

1. $4.5 \div 0.1 = \underline{45}$

$4.5 = 4 + 0.5$

$4 \div 0.1 = 40$

$0.5 \div 0.1 = 5$

$40 + 5 = 45$

40 groups of 0.1 in 4
5 groups of 0.1 in 0.5

2. $2.3 \div 0.01 = \underline{230}$

$2.3 = 2 + 0.3$

$2 \div 0.01 = 200$

$0.3 \div 0.01 = 30$

$200 + 30 = 230$



Guided Practice

**Determine the quotient.**

1. $4.7 \div 0.1 = \underline{\hspace{2cm}}$

$4.7 = 4 + 0.7$

$4 \div 0.1 = \underline{\hspace{2cm}}$

$0.7 \div 0.1 = \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2. $9.3 \div 0.01 = \underline{\hspace{2cm}}$

$9.3 = 9 + 0.3$

$9 \div 0.01 = \underline{\hspace{2cm}}$

$0.3 \div 0.01 = \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$



Guided Practice



Determine the quotient. Show your thinking.

3. $2.1 \div 0.1 =$ _____

$$2.1 = 2 + 0.1$$

$$2 \div 0.1 =$$

$$0.1 \div 0.1 =$$

$$+ =$$

4. $9.9 \div 0.01 =$ _____

$$9.9 = 9 + 0.9$$

$$9 \div 0.01 =$$

$$0.9 \div 0.01 =$$

$$+ =$$

5. $8.4 \div 0.1 =$ _____

$$8.4 = 8 + 0.4$$

$$\div 0.1 =$$

$$\div 0.1 =$$

$$+ =$$

6. $5.2 \div 0.01 =$ _____

$$5.2 = 5 + 0.2$$

$$\div 0.01 =$$

$$\div 0.01 =$$

$$+ =$$

7. $6.3 \div 0.1 =$ _____

8. $3.6 \div 0.01 =$ _____



Check



Determine the quotient. Show your thinking.

1. $3.2 \div 0.1 =$ _____

2. $7.8 \div 0.01 =$ _____

Solving Real-World Problems Involving Dividing Decimals

ML 5.24



Modeled Review

Name: Dylan

Solve the problem. Show your work.

Priya and Han each listen to an audiobook on insects at different speeds.

- The length of the book is 50 minutes.
- Priya listens at a speed of 0.5.
- Han listens at a speed of 2.5.

How many more minutes did Priya listen than Han?

answer: 80 minutes

Priya

$$50 \div 0.5 = 500 \div 5$$

$$500 \div 5 = 100$$

Han

$$50 \div 2.5 = 500 \div 25$$

$$500 \div 25 = 20$$

$$100 - 20 = 80$$



Guided Practice



Solve the problem by completing the steps. Show your thinking.

1. Clare and Tristan each listen to a song at different speeds.

- The length of the song is 2 minutes.
- Clare listens at a speed of 0.5.
- Tristan listens at a speed of 0.25.

How many total minutes did it take for Clare and Tristan to listen to the song?

answer: _____ minutes

Step 1	Length of song \div Clare's speed	$2 \div 0.5 = 20 \div 5$ $20 \div 5 = 4$
Step 2	Length of song \div Tristan's speed	$2 \div 0.25 = 200 \div \underline{\hspace{1cm}}$ $200 \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
Step 3	Clare's time + Tristan's time	$4 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$



Guided Practice



Solve the problem. Show your work.

2. Eva and Avery each listen to an audiobook on planets at different speeds.

- The length of the book is 15 minutes.
- Eva listens at a speed of 0.75.
- Avery listens at a speed of 1.5.

How many more minutes did Eva spend listening than Avery?

answer: _____

3. Maya and Jada each listen to an audiobook on bees at different speeds.

- The length of the book is 10 minutes.
- Maya listens at a speed of 0.25.
- Jada listens at a speed of 2.5.

How many total minutes did it take for Maya and Jada to listen?

answer: _____



Check



Solve the problem. Show your work.

Santiago and Jack each listen to an audiobook on fossils at different speeds.

- The length of the book is 30 minutes.
- Santiago listens at a speed of 0.5.
- Jack listens at a speed of 1.5.

How many more minutes did Santiago spend listening than Jack?

answer: _____

Unit 6

Mini-Lessons

Representing Powers of 10 With Exponents

ML 6.02



Modeled Review



Exponential form	$ \begin{array}{ccc} & 10^6 & \\ \nearrow & & \nwarrow \\ \text{base} & & \text{exponent} \end{array} $
Multiplication expression	$10 \times 10 \times 10 \times 10 \times 10 \times 10$
Standard form	1,000,000



Guided Practice



Fill in the missing information to make each equation true.

1. $10 = 10^1$

2. $10 \times 10 = \underline{\hspace{2cm}} = 10^2$

3. $10 \times 10 \times \underline{\hspace{2cm}} = 1,000 = 10^3$

4. $10 \times 10 \times 10 \times \underline{\hspace{2cm}} = 10,000 = 10^{\boxed{\hspace{1cm}}}$

5. $10 \times 10 \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{2cm}} = 10^{\boxed{\hspace{1cm}}}$

6. $10 \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = 1,000,000 = 10^{\boxed{\hspace{1cm}}}$

7. $10 \times 10 \times 10 \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{2cm}} = 10^7$



Guided Practice



8. Complete the table by writing the exponential form, a multiplication expression, or the standard form for each power of 10.

Exponential form	Multiplication expression	Standard form
10^4		10,000
	10×10	
10^7		
10^9	$10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10$	
	$10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10$	10,000,000,000



Check



- Complete the table by writing the exponential form, a multiplication expression, or the standard form for each power of 10.

Exponential form	Multiplication expression	Standard form
10^3		
	10	
		100,000
10^6	$10 \times 10 \times 10 \times 10 \times 10 \times 10$	

Multiplying by Powers of 10

ML 6.03



Modeled Review

Name: Tristan

Determine the product. Show your thinking.

$$6 \times 10^5 = \underline{600,000}$$

$$10^5 = 10 \times 10 \times 10 \times 10 \times 10 = 100,000$$

$$6 \times 100,000 = 600,000$$



Guided Practice



1. Use the information in the table to find the product.

Original Expression	Equivalent Expression	Product in standard form
4×10^1	4×10	
4×10^2	$4 \times 10 \times 10$	
4×10^3		
4×10^4		



Guided Practice



2. Determine the product.

Original Expression	Equivalent Expression	Product in standard form
7×10^5	$7 \times 10 \times 10 \times 10 \times 10 \times 10$	
77×10^5	$77 \times 100,000$	
3×10^2		
30×10^2		

Determine the product. Show your thinking.

3. $9 \times 10^4 =$ _____

4. $8 \times 10^3 =$ _____

$10^4 = 10,000$



Check



Determine the product. Show your thinking.

1. $3 \times 10^5 =$ _____

2. $5 \times 10^2 =$ _____

Dividing by Powers of 10

ML 6.04



Modeled Review

Name: Jack

Evaluate each expression. Show your thinking.

1. $22 \div 10^3 = \underline{0.022}$

$10^3 = 10 \times 10 \times 10 = 1,000$

$22 \div 1,000 = 0.022$

tens	ones	tenths	hundredths	thousandths
2	2			
	0	0	2	2

2. $45.7 \div 10^2 = \underline{0.457}$

$10^2 = 10 \times 10 = 100$

$45.7 \div 100 = 0.457$

tens	ones	tenths	hundredths	thousandths
4	5	7		
	0	4	5	7



Guided Practice



Evaluate each equation.

1. $4,720 \div 10^1 = 4,720 \div 10 = 472.0$

2. $4,720 \div 10^2 = 4,720 \div 100 = \underline{\hspace{2cm}}$

3. $4,720 \div 10^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4. $4,720 \div 10^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5. $4,720 \div 10^5 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$



Guided Practice



Evaluate each equation.

6. $841 \div 10^2 =$ _____ $=$ _____

7. $841 \div 10^3 =$ _____ $=$ _____

8. $387.5 \div 10^1 =$ $387.5 \div 10 =$ 38.75

9. $387.5 \div 10^2 =$ _____ $=$ _____

10. $387.5 \div 10^3 =$ _____ $=$ _____

11. $387.5 \div 10^4 =$ _____ $=$ _____

12. $152.1 \div 10^1 =$ _____ $=$ _____

13. $152.1 \div 10^2 =$ _____ $=$ _____



Check



Evaluate each equation.

1. $45,736 \div 10^4 =$ _____

2. $41.3 \div 10^2 =$ _____

Placing Decimal Points When Multiplying and Dividing by Powers of 10

ML 6.05



Modeled Review

Name: Han

Determine each product or quotient.

1. $47.200 \times 10^3 = \underline{47,200}$



$47.20 \times 10^2 = \underline{4,720}$



$47.2 \times 10^1 = \underline{472}$



2. $47.2 \div 10^1 = \underline{4.72}$



$47.2 \div 10^2 = \underline{0.472}$



$0.472 \div 10^3 = \underline{0.00472}$



Guided Practice



Determine each product or quotient. Show your thinking.

1. $4.0 \times 10^1 = 40$



2. $4 \div 10^1 = \underline{\hspace{2cm}}$



3. $4 \times 10^3 = \underline{\hspace{2cm}}$

4. $4 \div 10^3 = \underline{\hspace{2cm}}$

5. $4.5 \times 10^4 = \underline{\hspace{2cm}}$

6. $4.5 \div 10^4 = \underline{\hspace{2cm}}$



Guided Practice



Determine each product or quotient.

7. $84.1 \times 10^2 =$ _____

8. $84.1 \div 10^2 =$ _____

9. $16.23 \times 10^5 =$ _____

10. $16.23 \div 10^5 =$ _____

11. $37.5 \times 10^1 =$ _____

12. $37.5 \div 10^1 =$ _____

13. $932.1 \times 10^3 =$ _____

14. $932.1 \div 10^3 =$ _____



Check



Determine each product or quotient. Show your thinking.

1. $21.54 \div 10^4 =$ _____

2. $103.2 \times 10^3 =$ _____

3. $82.6 \div 10^1 =$ _____

4. $7.8 \times 10^2 =$ _____

Converting Millimeters, Centimeters, Meters, and Kilometers

ML 6.06



Modeled Review

Name: Diego

Clare ran 14,500 meters last week. How many kilometers did Clare run?

$$14,500 \div 1,000 = 14.5$$

$$1 \text{ kilometer} = 1,000 \text{ meters}$$

$$1 \text{ meter} = 100 \text{ centimeters}$$

$$1 \text{ centimeter} = 10 \text{ millimeters}$$

answer: 14.5 kilometers



Guided Practice



Complete the conversions. Show your thinking.

1. 1 kilometer = 1,000 meters

2. 1 meter = 100 centimeters

4 kilometers = _____ meters

6.5 meters = _____ centimeters

$1,000 \times 4 =$ _____

3. 1 meter = 1,000 millimeters

4. 1 centimeter = 10 millimeters

_____ meters = 5,000 millimeters

_____ centimeters = 43 millimeters



Guided Practice



Use the information about the caterpillar to complete each conversion. Show your thinking.

5. A caterpillar moves 220 centimeters in 4 minutes. How many meters does the caterpillar move?

answer: _____

6. A caterpillar moves 60 centimeters in 30 seconds. How many millimeters does the caterpillar move?

answer: _____

7. A caterpillar moves 864 centimeters in a day. How many millimeters does the caterpillar move in a day?

answer: _____

8. A caterpillar moves 15 millimeters. How many centimeters did the caterpillar move?

answer: _____



Check



Clare ran a 5,500 meter race. How many kilometers did Clare run? Show your thinking.

answer: _____

Converting Milligrams, Grams, and Kilograms

ML 6.07



Modeled Review

Name: Eva

Which weighs more, 8 packets of A or 2 packets of B? Show your thinking.

Packet A

500 grams

Packet B

5 kilograms

Packet A

$$8 \times 500 = 4,000 \text{ grams}$$

$$4,000 \text{ grams} = 4 \text{ kilograms}$$

Packet B

$$5 \times 2 = 10 \text{ kilograms}$$

answer: 2 packets of B

$$1,000 \text{ grams} = 1 \text{ kilogram}$$



Guided Practice



Complete the conversions. Show your thinking.

1. 1 kilogram = 1,000 grams

7 kilograms = _____ grams

2. 1 gram = 1,000 milligrams

3.2 grams = _____ milligrams

3. 1 kilogram = 1,000 grams

$\frac{1}{2}$ kilogram = _____ grams

1,000 \div 2 = _____

4. 10,000 milligrams = 10 grams

_____ milligrams = 1 gram

10,000 \div 10 = _____



Guided Practice



Solve each story problem. Show your thinking.

5. A pencil weighs 25 grams. How many milligrams do 4 pencils weigh?

1 gram = 1,000 milligrams

answer: _____

6. A spiral notebook weighs 100,000 milligrams. How many grams do 3 spiral notebooks weigh?

answer: _____

7. A pencil weighs 25 grams. A pair of scissors weighs 120,000 milligrams. Which weighs more, 10 pencils or 2 pairs of scissors?

answer: _____

8. A desk weighs 5 kilograms. A student chair weighs 2,000 grams. Which weighs more, 5 desks or 10 chairs?

answer: _____



Check



Which weighs more, 9 packets of A or 3 packets of B? Show your thinking.

Packet A

5,000
milligrams

Packet B

30 grams

answer: _____

Converting Liters and Milliliters

ML 6.08



Modeled Review

Name: Santiago

4 volunteers each mixed 2.5 liters of nectar with 4,100 milliliters of water for hummingbird feeders. How many total liters of nectar mixture did they make?

$$4,100 \div 1,000 = 4.1 \text{ liters}$$

$$2.5 + 4.1 = 6.6 \text{ liters of nectar mixture}$$

$$\begin{array}{r} 6.6 \\ \times 4 \\ \hline \end{array}$$

26.4 liters of nectar mixture

answer: 26.4 liters

1 liter = 1,000 milliliters



Guided Practice



Complete the conversions. Show your thinking.

1. 1 liter = 1,000 milliliters

4 liters = _____ milliliters

$4 \times 1,000 =$ _____

2. 1 liter = 1,000 milliliters

_____ liters = 23.2 milliliters

$23.2 \div 1,000 =$ _____

3. 1 liter = _____ milliliters

10 liters = _____ milliliters

4. 1 liter = _____ milliliters

_____ liters = 165 milliliters



Guided Practice



Solve each story problem. Show your thinking.

5. Clare washes dishes 6 times a week and uses 50,000 milliliters per wash. How many liters of water does Clare use washing dishes each week?

answer: _____

6. Clare is painting 2 rooms in her house. She is mixing red and white paint to create the color she wants. If each room needs 1.5 liters of white and 750 milliliters of red, how many liters of paint does she need to paint both rooms?

answer: _____



Check



Solve the story problem. Show your thinking.

3 volunteers each mixed 3.4 liters of broth with 2,100 milliliters of water to make a base for a stew. How many total milliliters of the mixture did they make?

answer: _____

Converting Inches, Feet, Yards, and Miles

ML 6.09



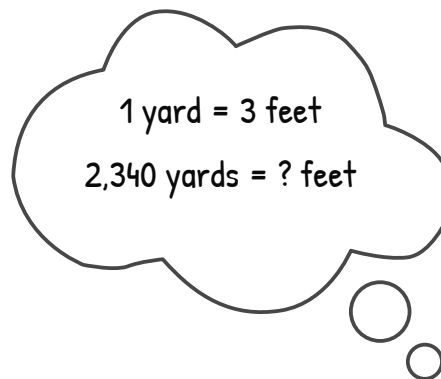
Modeled Review

Name: Han

A walking path is 2,340 yards long. How long is the walking path in feet?

$$2,340 \times 3 = 7,020$$

$$\begin{array}{r} 11 \\ 2,340 \\ \times \quad 3 \\ \hline 7,020 \end{array}$$



answer: 7,020 feet



Guided Practice



Complete the conversions. Show your thinking.

1. 1 foot = 12 inches

3 feet = _____ inches

$12 \times 3 =$ _____

2. 1 yard = 3 feet

5 yards = _____ feet

$3 \times 5 =$ _____

3. 1 foot = _____ inches

$\frac{1}{2}$ foot = _____ inches

4. 1 mile = 5,280 feet

10 miles = _____ feet



Guided Practice



Solve each story problem. Show your thinking.

5. A football field is 100 yards. How long is a football field in feet?

answer: _____

6. The soccer team ran half a mile before practice. How many yards did they run?

1 mile = 1,760 yards

answer: _____

7. A soccer ball was kicked 120 inches. How far is that in feet?

answer: _____

8. A football goal post has a height of 30 feet. How tall is the goal post in inches?

answer: _____



Check



Solve the story problem. Show your thinking.

A football player kicked a 66 yard field goal. How far is that in feet?

answer: _____

Converting Cups, Pints, Quarts, and Gallons

ML 6.10



Modeled Review

Name: Tristan

A restaurant used 16 pints of water during breakfast and 40 cups of water during lunch. How many quarts of water did the restaurant use?

$$40 \text{ cups} = ? \text{ pints} \quad 20 + 16 = 36 \quad 36 \text{ pints} = ? \text{ quarts}$$

$$40 \div 2 = 20$$

$$36 \div 2 = 18$$

$$1 \text{ pint} = 2 \text{ cups}$$

$$1 \text{ quart} = 2 \text{ pints}$$

$$1 \text{ gallon} = 4 \text{ quarts}$$

answer: 18 quarts



Guided Practice



Complete the conversions. Show your thinking.

1. 1 pint = 2 cups

$$8 \text{ pints} = \underline{\hspace{2cm}} \text{ cups}$$

$$2 \times 8 = \underline{\hspace{2cm}}$$

2. 1 quart = 2 pints

$$30 \text{ quarts} = \underline{\hspace{2cm}} \text{ pints}$$

3. 1 gallon = 4 quarts

$$\frac{1}{2} \text{ gallon} = \underline{\hspace{2cm}} \text{ quarts}$$



Guided Practice



Solve each story problem. Show your thinking.

4. Diego gives 8 cups of water to the dogs at the shelter. He gives 6 pints of water to the cats. How many pints of water did Diego give to the animals?
1 pint = 2 cups

answer: _____

5. A school's water filter station uses 20 quarts of water during recess and 48 pints of water during lunch. How many gallons of water does the water filter station use in all during those times?

answer: _____



Check



Solve the story problem. Show your thinking.

During a fundraiser for the 5th grade field trip, students sell 20 cups of lemonade and 6 quarts of tea. How many quarts of drinks did they sell altogether?

answer: _____

Converting Ounces, Pounds, and Tons

ML 6.11



Modeled Review

Name: Priya

A store ordered three cases of watermelons weighing 40 pounds each, two cases of cantaloupe weighing 25 pounds each, and a case of lemons weighing 32 ounces. How many pounds of produce did the store order?

$$40 \times 3 = 120 \text{ pounds}$$

$$25 \times 2 = 50 \text{ pounds}$$

$$32 \text{ ounces} = 2 \text{ pounds} \quad 120 + 50 + 2 = 172 \text{ pounds}$$

answer: 172 pounds

1 pound = 16 ounces
2,000 pounds = 1 ton



Guided Practice



Complete the conversions. Show your thinking.

1. 1 pound = 16 ounces

2 pounds = _____ ounces

$16 \times 2 = \underline{\hspace{2cm}}$

2. 1 ton = _____ pounds

3 tons = _____ pounds

$2,000 \times 3 = \underline{\hspace{2cm}}$

3. 1 pound = _____ ounces

$\frac{1}{2}$ pound = _____ ounces

4. 1 ton = _____ pounds

$\frac{1}{2}$ ton = _____ pounds

5. 1 pound = _____ ounces

$\frac{1}{4}$ pound = _____ ounces

6. 1 ton = _____ pounds

10 tons = _____ pounds



Guided Practice



Solve each story problem. Show your thinking.

7. Maya is collecting trash on the beach. At the end of the day, she collected 160 ounces of trash. How many pounds of trash did she collect?

answer: _____

8. A construction team is moving lumber and bricks. The team has 1,500 pounds of lumber and $\frac{1}{2}$ ton of bricks to move. How many pounds of materials does the construction team have to move?

answer: _____

9. Maya goes shopping for groceries. She buys 1 pound of grapes, 8 ounces of berries and 2 pounds of apples. How many ounces of fruit did she buy altogether?

answer: _____



Check



Solve the story problem. Show your thinking.

Maya has 2 bags of groceries that weigh 10 pounds each. How many ounces of groceries does she have?

answer: _____

Representing Addition and Subtraction of Fractions With Unlike Denominators

ML 6.12



Modeled Review

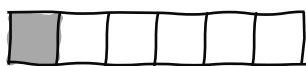
Name: Avery

Determine the sum or difference.

1. $\frac{1}{3} + \frac{1}{6} = \frac{3}{6}$

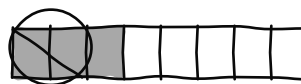


$$\frac{1}{3} = \frac{2}{6}$$



$$\frac{2}{6} + \frac{1}{6} = \frac{3}{6}$$

2. $\frac{3}{8} - \frac{1}{4} = \frac{1}{8}$



$$\frac{1}{4} = \frac{2}{8}$$

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

$$\frac{3}{8} - \frac{2}{8} = \frac{1}{8}$$

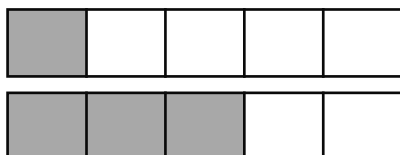


Guided Practice

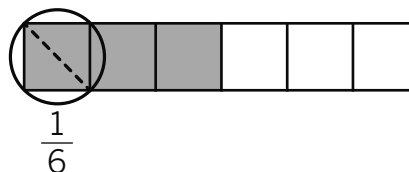


Determine the sum or difference.

1. $\frac{1}{5} + \frac{3}{5} =$ _____

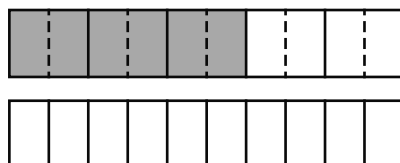


2. $\frac{3}{6} - \frac{1}{6} =$ _____



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

3. $\frac{3}{5} + \frac{2}{10} =$ _____



$$\frac{3}{5} =$$

$$+ \frac{2}{10} =$$

4. $\frac{3}{4} - \frac{1}{2} =$ _____



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

$$\frac{3}{4} - =$$



Guided Practice



Determine the sum or difference. Show your thinking.

5. $\frac{1}{4} + \frac{3}{8} =$ _____

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

6. $\frac{4}{9} - \frac{1}{3} =$ _____

7. $\frac{2}{3} + \frac{1}{6} =$ _____



Check



Determine the sum or difference. Show your thinking.

1. $\frac{1}{2} + \frac{3}{8} =$ _____

2. $\frac{5}{6} - \frac{1}{3} =$ _____

Adding and Subtracting Fractions With Unlike Denominators

ML 6.13



Modeled Review

Name: Eva

Determine the sum or difference.

1. $\frac{2}{4} + \frac{3}{12} = \frac{9}{12}$

2. $\frac{3}{8} - \frac{1}{16} = \frac{5}{16}$

$$\frac{2}{4} = \frac{2 \times 3}{4 \times 3} = \frac{6}{12}$$

$$\frac{3}{8} = \frac{3 \times 2}{8 \times 2} = \frac{6}{16}$$

$$\frac{6}{12} + \frac{3}{12} = \frac{9}{12}$$

$$\frac{6}{16} - \frac{1}{16} = \frac{5}{16}$$



Guided Practice



Determine the sum or difference.

1. $\frac{2}{6} + \frac{1}{3} =$ _____

2. $\frac{3}{4} - \frac{1}{2} =$ _____

multiples of 3: 3, 6, 9

multiples of 2: 2, 4, 6

multiples of 6: 6, 12, 18

multiples of 4: _____, _____, _____

common denominator: 6

common denominator: _____

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

$$\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$$

$$\frac{2}{6} + \frac{2}{6} = \frac{4}{6}$$

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



Guided Practice



Determine the sum or difference. Show your thinking.

3. $\frac{3}{4} + \frac{2}{12} =$ _____

multiples of 4: _____, _____, _____

multiples of 12: 12, 24, 36

common denominator: _____

$$\frac{3}{4} = \frac{3 \times}{4 \times} = \frac{\quad}{\quad}$$

$$\frac{\quad}{\quad} + \frac{2}{12} =$$

4. $\frac{4}{5} - \frac{6}{10} =$ _____

multiples of 5: _____, _____, _____

multiples of 10: _____, _____, _____

common denominator: _____

$$\frac{4}{5} = \frac{4 \times}{5 \times} = \frac{\quad}{\quad}$$

$$\frac{\quad}{\quad} - \frac{6}{10} = \frac{\quad}{\quad}$$

5. $\frac{3}{12} + \frac{2}{3} =$ _____

6. $\frac{7}{8} - \frac{1}{2} =$ _____



Check



Determine the sum or difference. Show your thinking.

1. $\frac{1}{2} + \frac{1}{4} =$ _____

2. $\frac{5}{9} - \frac{1}{3} =$ _____

Choosing a Common Denominator

ML 6.14



Modeled Review

Name: Jack

Determine the difference.

$$\frac{5}{8} - \frac{4}{12} = \frac{7}{24}$$

multiples of 8: 8, 16, 24, 32, 40multiples of 12: 12, 24, 36

$$\frac{5}{8} = \frac{5 \times 3}{8 \times 3} = \frac{15}{24}$$

$$\frac{4}{12} = \frac{4 \times 2}{12 \times 2} = \frac{8}{24}$$

$$\frac{15}{24} - \frac{8}{24} = \frac{7}{24}$$

Name: Kai

Determine the difference.

$$\frac{5}{8} - \frac{4}{12} = \frac{7}{24}$$

$$\frac{5}{8} = \frac{5 \times 12}{8 \times 12} = \frac{60}{96}$$

$$\frac{4}{12} = \frac{4 \times 8}{12 \times 8} = \frac{32}{96}$$

$$\frac{60}{96} - \frac{32}{96} = \frac{28}{96}$$



Guided Practice



Determine the sum. Show your thinking.

1. $\frac{1}{4} + \frac{3}{10} =$ _____

multiples of 4: 4, 8, 12, 16, 20, 24, 28

multiples of 10: 10, 20, 30, 40

$$\frac{1}{4} = \frac{1 \times 5}{4 \times 5} = \frac{5}{20}$$

$$\frac{3}{10} = \frac{3 \times 2}{10 \times 2} = \frac{6}{20}$$

$$\frac{5}{20} + \frac{6}{20} = \frac{11}{20}$$

2. $\frac{5}{6} - \frac{2}{8} =$ _____

multiples of 6: 6, 12, _____, _____, _____

multiples of 8: 8, 16, _____, _____

$$\frac{5}{6} = \frac{5 \times 4}{6 \times 4} = \frac{20}{24}$$

$$\frac{2}{8} = \frac{2 \times 3}{8 \times 3} = \frac{6}{24}$$



Guided Practice



Determine the difference. Show your thinking.

3. $\frac{1}{2} + \frac{2}{5} =$ _____

$$\frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{5}{10}$$

$$\frac{2}{5} = \frac{2 \times 2}{5 \times 2} = \frac{4}{10}$$

4. $\frac{4}{5} - \frac{3}{7} =$ _____

$$\frac{4}{5} = \frac{4 \times 7}{5 \times 7} = \frac{\quad}{35}$$

$$\frac{3}{7} = \frac{3 \times 5}{7 \times 5} = \frac{\quad}{35}$$

5. $\frac{1}{3} + \frac{1}{2} =$ _____

6. $\frac{3}{4} - \frac{2}{6} =$ _____



Check



Determine the sum or difference. Show your thinking.

1. $\frac{3}{5} + \frac{1}{4} =$ _____

2. $\frac{8}{10} - \frac{1}{6} =$ _____

Adding Mixed Numbers With Unlike Denominators

ML 6.15



Modeled Review

Name: Priya

Determine the sum. Show your thinking.

$$3\frac{2}{3} + 5\frac{1}{6} = \underline{8\frac{5}{6}}$$

$$3 + 5 = 8$$

$$\frac{2}{3} + \frac{1}{6} = \frac{4}{6} + \frac{1}{6}$$

$$\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$$

$$8 + \frac{5}{6} = 8\frac{5}{6}$$



Guided Practice



Determine the sum. Show your thinking.

1. $2\frac{3}{8} + 1\frac{4}{8} = \underline{\hspace{2cm}}$

$$2 + 1 = \boxed{}$$

$$\frac{3}{8} + \frac{4}{8} = \boxed{}$$

$$\boxed{} + \boxed{} = \boxed{}$$

2. $3\frac{1}{5} + 9\frac{7}{10} = \underline{\hspace{2cm}}$

$$3 + 9 = \boxed{}$$

$$\frac{1}{5} + \frac{7}{10} = \frac{2}{10} + \frac{7}{10}$$

$$\frac{2}{10} + \frac{7}{10} = \boxed{}$$

$$\boxed{} + \boxed{} = \boxed{}$$



Guided Practice



Determine the sum. Show your thinking.

3. $4\frac{2}{9} + 2\frac{1}{3} =$ _____

$$4 + 2 = \boxed{}$$

$$\frac{2}{9} + \frac{1}{3} = \frac{2}{9} + \boxed{}$$

$$\frac{2}{9} + \boxed{} = \boxed{}$$

$$\boxed{} + \boxed{} = \boxed{}$$

4. $7\frac{1}{2} + 4\frac{1}{6} =$ _____

$$7 + 4 = \boxed{}$$

$$\frac{1}{2} + \frac{1}{6} = \boxed{} + \boxed{}$$

$$\boxed{} + \boxed{} = \boxed{}$$

$$\boxed{} + \boxed{} = \boxed{}$$

5. $2\frac{3}{4} + 3\frac{1}{8} =$ _____



Check



Determine the sum. Show your thinking.

$2\frac{2}{5} + 5\frac{3}{10} =$ _____

Writing Equivalent Subtraction Equations With Mixed Numbers

ML 6.16



Modeled Review

Name: Dylan

Calculate the difference. Show your thinking.

$$4\frac{7}{12} - 1\frac{2}{3} = \underline{2\frac{11}{12}}$$

$$4\frac{7}{12} - 1\frac{2}{3} = 4\frac{7}{12} - 1\frac{8}{12}$$

$$4\frac{7}{12} = 3 + \frac{12}{12} + \frac{7}{12} = 3\frac{19}{12}$$

$$3\frac{19}{12} - 1\frac{8}{12} = 2\frac{11}{12}$$



Guided Practice



Calculate the difference. Show your thinking.

1. $3\frac{1}{6} - 1\frac{2}{3} = \underline{\hspace{2cm}}$

$$3\frac{1}{6} - 1\frac{2}{3} = 3\frac{1}{6} - 1\frac{4}{6}$$

$$3\frac{1}{6} = 2 + \frac{6}{6} + \frac{1}{6} = \boxed{\hspace{1cm}}$$

$$\boxed{\hspace{1cm}} - 1\frac{4}{6} = \boxed{\hspace{1cm}}$$

2. $7\frac{1}{8} - 4\frac{3}{4} = \underline{\hspace{2cm}}$

$$7\frac{1}{8} - 4\frac{3}{4} = 7\frac{1}{8} - 4\frac{6}{8}$$

$$7\frac{1}{8} = 6 + \boxed{\hspace{1cm}} + \boxed{\hspace{1cm}} = \boxed{\hspace{1cm}}$$

$$\boxed{\hspace{1cm}} - 4\frac{6}{8} = \boxed{\hspace{1cm}}$$



Guided Practice



Calculate the difference. Show your thinking.

3. $5\frac{1}{4} - 2\frac{1}{2} =$ _____

$$5\frac{1}{4} - 2\frac{1}{2} = 5\frac{1}{4} - 2\frac{2}{4}$$

$$5\frac{1}{4} = \boxed{} + \boxed{} + \boxed{} = \boxed{}$$

$$\boxed{} - 2\frac{2}{4} = \boxed{}$$

4. $7\frac{5}{12} - 3\frac{3}{4} =$ _____

$$7\frac{5}{12} - 3\frac{3}{4} = 7\frac{5}{12} - \boxed{}$$

$$7\frac{5}{12} = \boxed{} + \boxed{} + \boxed{} = \boxed{}$$

$$\boxed{} - \boxed{} = \boxed{}$$

5. $6\frac{1}{10} - 3\frac{2}{5} =$ _____



Check



Calculate the difference. Show your thinking.

$5\frac{1}{8} - 2\frac{1}{4} =$ _____

Subtracting Mixed Numbers With Unlike Denominators

ML 6.17



Modeled Review

Name: Jada

Calculate the difference. Show your thinking.

$$1\frac{3}{4} - 5\frac{2}{3} = \underline{2\frac{1}{12}}$$

$$7\frac{3}{4} - 5\frac{2}{3} = 7\frac{9}{12} - 5\frac{8}{12}$$

$$7 - 5 = 2$$

$$\frac{9}{12} - \frac{8}{12} = \frac{1}{12}$$

$$2 + \frac{1}{12} = 2\frac{1}{12}$$



Guided Practice



Calculate the difference. Show your thinking.

1. $3\frac{1}{3} - 2\frac{1}{6} = \underline{\hspace{2cm}}$

$$3\frac{1}{3} - 2\frac{1}{6} = 3\frac{2}{6} - 2\frac{1}{6}$$

$$3 - 2 = \boxed{\hspace{1cm}}$$

$$\frac{2}{6} - \frac{1}{6} = \boxed{\hspace{1cm}}$$

$$\boxed{\hspace{1cm}} + \boxed{\hspace{1cm}} = \boxed{\hspace{1cm}}$$

2. $11\frac{7}{10} - 9\frac{1}{5} = \underline{\hspace{2cm}}$

$$11\frac{7}{10} - 9\frac{1}{5} = 11\frac{7}{10} - 9\frac{2}{10}$$

$$\boxed{\hspace{1cm}} - \boxed{\hspace{1cm}} = \boxed{\hspace{1cm}}$$

$$\boxed{\hspace{1cm}} - \boxed{\hspace{1cm}} = \boxed{\hspace{1cm}}$$

$$\boxed{\hspace{1cm}} + \boxed{\hspace{1cm}} = \boxed{\hspace{1cm}}$$



Guided Practice



Calculate the difference. Show your thinking.

3. $3\frac{1}{5} - 1\frac{2}{3} =$ _____

4. $10\frac{2}{3} - 6\frac{1}{4} =$ _____

5. $5\frac{1}{3} - 3\frac{1}{2} =$ _____



Check



Calculate the difference. Show your thinking.

$8\frac{3}{4} - 4\frac{1}{6} =$ _____

Representing Data on a Line Plot and Solving Problems

ML 6.18



Modeled Review

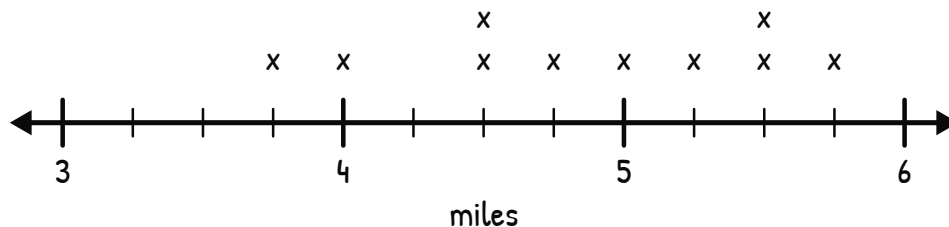
Name: Avery

Students were surveyed about the number of miles they biked in a week. The results are shown in the table.

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

1. Represent the data on a line plot. Include a title and label.

Miles Biked By Students in a Week



2. What is the difference between the greatest number of miles biked and least number of miles biked?

$$5\frac{3}{4} - 3\frac{3}{4} = 2$$

answer: 2 miles



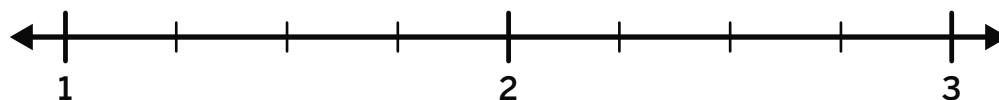
Guided Practice



Represent the data on a line plot. Include a title and label.

1. Han surveyed students about how many hours they practiced a musical instrument each day.

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

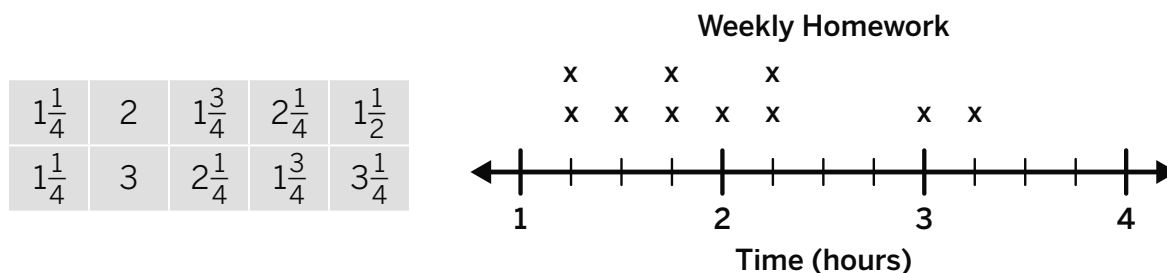




Guided Practice



Several students were surveyed about how many hours they spend on homework in a week. Use the line plot data to answer the questions.



2. How many students completed the survey? answer: _____
3. What fraction of the students spent fewer than 3 hours on homework? answer: _____
4. What fraction of students spent at least $2\frac{1}{4}$ hours on homework? answer: _____
5. What is the difference between the greatest number of hours spent on homework and the least number of hours? answer: _____

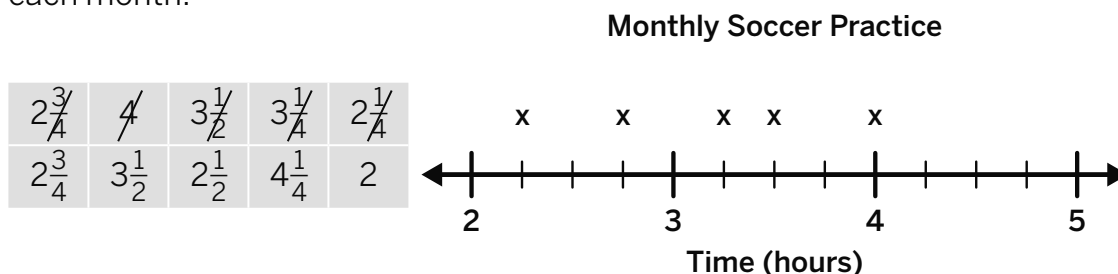


Check



Complete the line plot and answer the question.

1. Diego keeps track of the time he spends at different soccer practices each month.



2. What is the difference between the greatest number of hours Diego spent practicing and the least number of hours he spent practicing? Show or explain your thinking. answer: _____

Using Line Plots to Solve Problems

ML 6.19



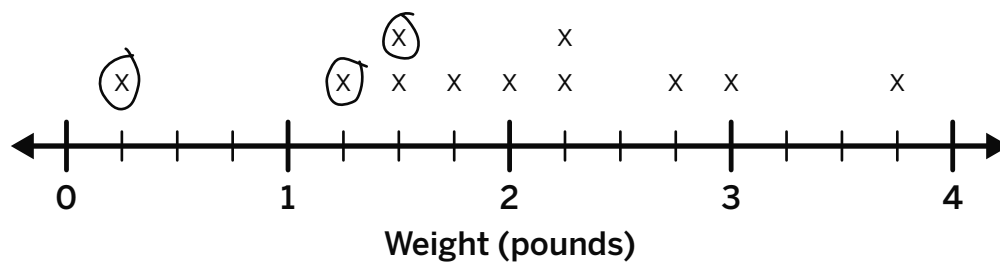
Modeled Review

Name: Jada

Use the line plot to answer the question.

What is the total combined weight of the three smallest bags of fruit?

Bags of Fruit



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

answer: 3 pounds

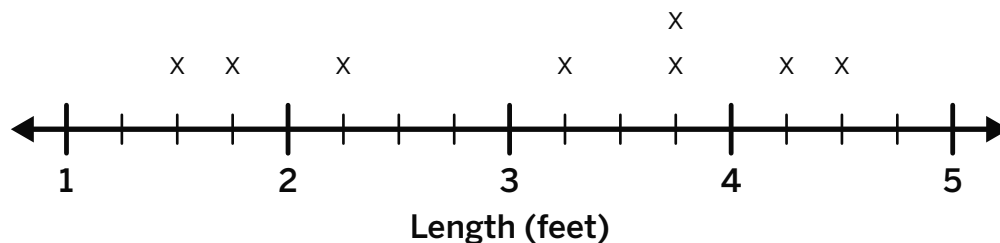


Guided Practice



Use the line plot data to answer the questions.

Ribbon Measurements



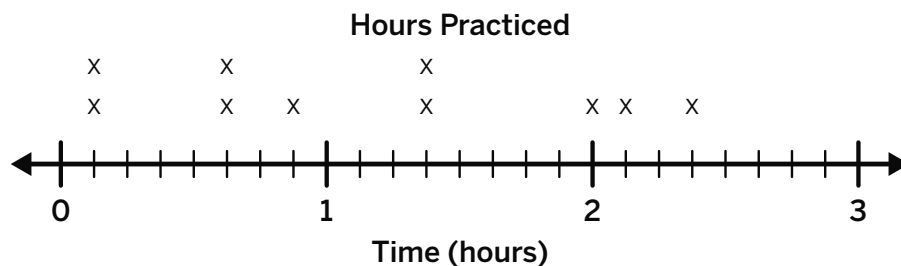
1. How many ribbons are shown in the line plot? answer: _____
2. What is the length of the longest ribbon? answer: _____
3. How many feet longer is the longest ribbon than the shortest ribbon? answer: _____



Guided Practice



Several students were surveyed about how many hours they practice playing an instrument each week. Use the line plot data to answer the questions.



4. What is the combined time for students who practiced 2 or more hours?

answer: _____

5. How much more time did the student with the greatest number of hours practice than the two students with the least number of hours combined?

answer: _____

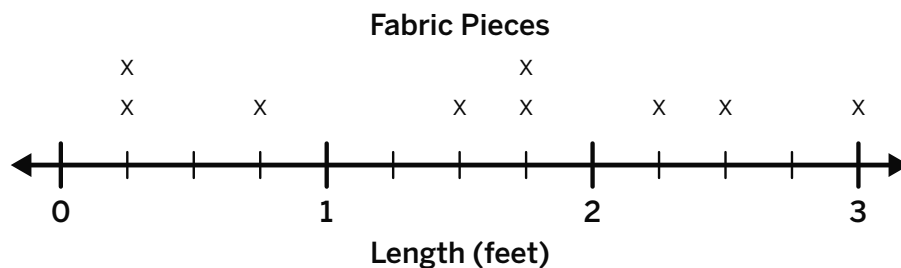


Check



Use the line plot data to answer the question.

What is the combined length of fabric pieces that were at least 2 feet?



answer: _____

Unit 7

Mini-Lessons

Describing and Sorting Quadrilaterals

ML 7.02



Modeled Review

Name: Santiago

Determine whether each quadrilateral has the attributes shown in the table. Place a check mark in the correct column.

Attributes			
no right angles	✓	✓	
at least 1 pair of parallel sides	✓	✓	✓
opposite side lengths are equal	✓		✓



Guided Practice



1. Place a check mark on each attribute that describes the shape.

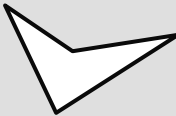


Shape A	Shape B
<input type="checkbox"/> 4 sides <input type="checkbox"/> At least 1 pair of parallel sides <input type="checkbox"/> At least 1 pair of perpendicular sides <input type="checkbox"/> At least 1 right angle <input type="checkbox"/> All angles are right angles <input type="checkbox"/> Opposite side lengths are equal	<input type="checkbox"/> 4 sides <input type="checkbox"/> At least 1 pair of parallel sides <input type="checkbox"/> At least 1 pair of perpendicular sides <input type="checkbox"/> At least 1 right angle <input type="checkbox"/> All angles are right angles <input type="checkbox"/> Opposite side lengths are equal



Guided Practice



2. Determine whether each quadrilateral has the attributes shown in the table. Place a check mark in the correct column.

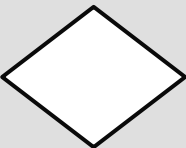
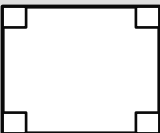

Attributes			
at least 1 pair of parallel sides			
no right angles			
exactly 1 right angle			
all angles are right angles			
opposite side lengths are equal			
4 sides			



Check



- Determine whether each quadrilateral has the attributes shown in the table. Place a check mark in the correct column.

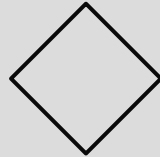
Attributes			
opposite side lengths are equal			
at least 1 pair of parallel sides			
all angles are right angles			
no right angles			
exactly 1 right angle			

Identifying Trapezoids

ML 7.03



Modeled Review



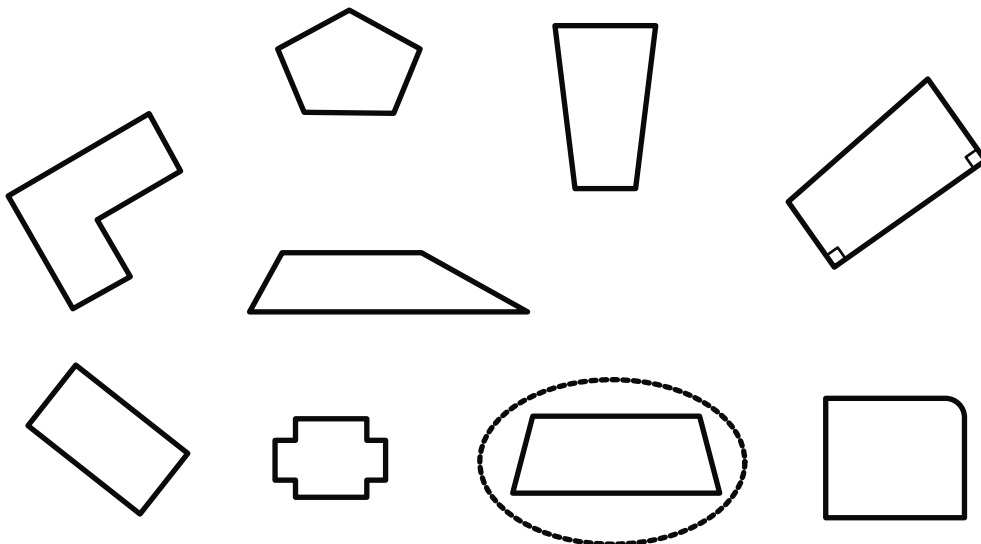
A trapezoid <i>must</i> have...	A trapezoid <i>may</i> have...
<ul style="list-style-type: none">○ 4 sides○ 4 angles○ 1 set of parallel sides	<ul style="list-style-type: none">○ 2 right angles○ No right angles○ 1 set of side lengths that are equal, but not parallel○ No equal-length sides



Guided Practice



1. Circle *all* the trapezoids.

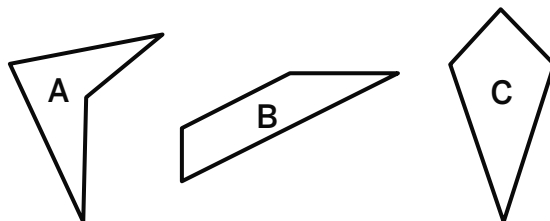




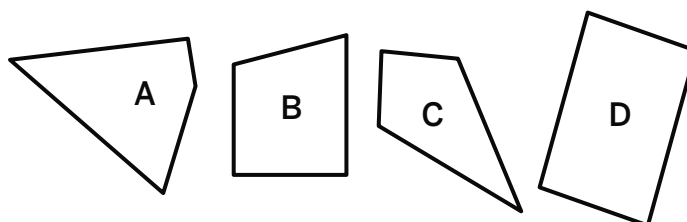
Guided Practice



2. Which quadrilateral is a trapezoid? Explain your thinking.



3. Which two quadrilaterals are trapezoids? Explain your thinking.

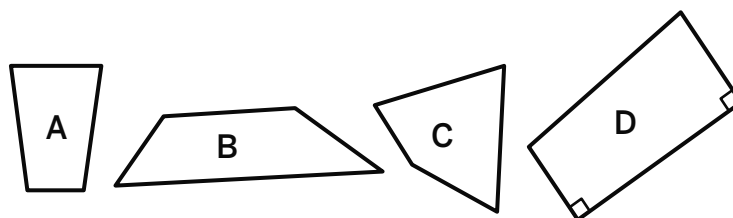




Check



Which quadrilaterals are trapezoids? Explain your thinking.



Using a Hierarchy to Classify Quadrilaterals

ML 7.04



Modeled Review



Quadrilateral 4 sided shapes

Trapezoid at least one pair of parallel sides

Parallelogram two pairs of parallel sides

Rhombus

equal side lengths

Square

equal side lengths
4 right angles

Rectangle

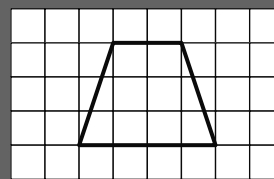
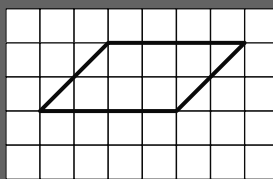
opposite side lengths
are equal
4 right angles



Guided Practice



- For each shape, determine *all* the possible names that describe it. Place a check mark in the correct column.



Quadrilateral	✓	✓
Trapezoid		
Parallelogram		
Rhombus		
Rectangle		
Square		



Guided Practice



2. For each shape, determine *all* the possible names that describe it. Place a check mark in the correct column.

Quadrilateral			
Trapezoid			
Parallelogram			
Rhombus			
Rectangle			
Square			



Check



- For each shape, determine *all* the possible names that describe it. Place a check mark in the correct column.

Quadrilateral			
Trapezoid			
Parallelogram			
Rhombus			
Rectangle			
Square			

Identifying Names of Quadrilaterals

ML 7.05



Modeled Review

Name: Avery

Select the most specific name for quadrilaterals A and B.

	Quadrilateral A 	Quadrilateral B
Trapezoid		✓
Parallelogram		
Rhombus		
Rectangle	✓	
Square		

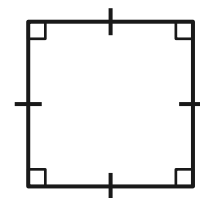


Guided Practice



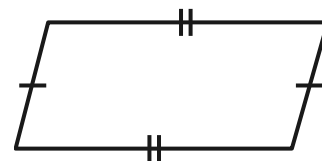
1. Name the figure with its most specific name.

- | | |
|---------------------|-------------------------|
| A. trapezoid | B. parallelogram |
| C. rhombus | D. quadrilateral |
| E. square | F. rectangle |



2. Name the figure with its most specific name.

- | | |
|---------------------|-------------------------|
| A. trapezoid | B. parallelogram |
| C. rhombus | D. quadrilateral |
| E. square | F. rectangle |





Guided Practice



3. Select the most specific name for quadrilaterals A–C.

	Quadrilateral A	Quadrilateral B	Quadrilateral C
Trapezoid			
Parallelogram			
Rhombus			
Rectangle			
Square			



Check



Select the most specific name for quadrilaterals A–C.

	Quadrilateral A	Quadrilateral B	Quadrilateral C
Trapezoid			
Parallelogram			
Rhombus			
Rectangle			
Square			

Using the Coordinate Grid to Locate Points

ML 7.06



Modeled Review

Name: Jack

Describe the location of each point.

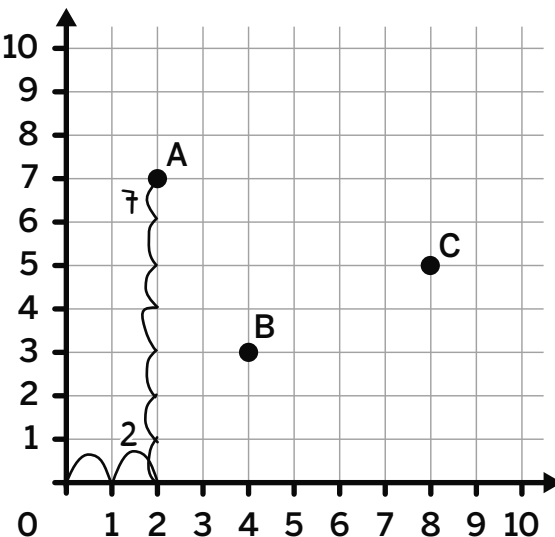
1. point A

2 units right, then up 7 units

2. point B

(4, 3)

3. point C

(8, 5)

Guided Practice

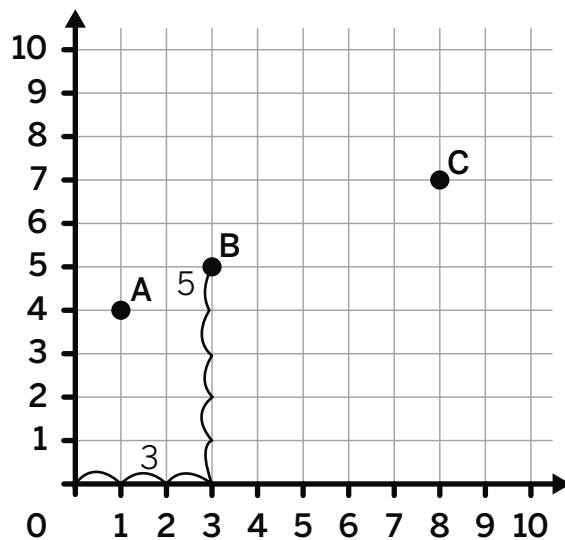


Identify the point that is shown by each ordered pair.

1. (3, 5)

2. (1, 4)

3. (8, 7)





Guided Practice



Use only numbers to describe the location of each given point.

4. point A

1 unit to the right, then up 5 units

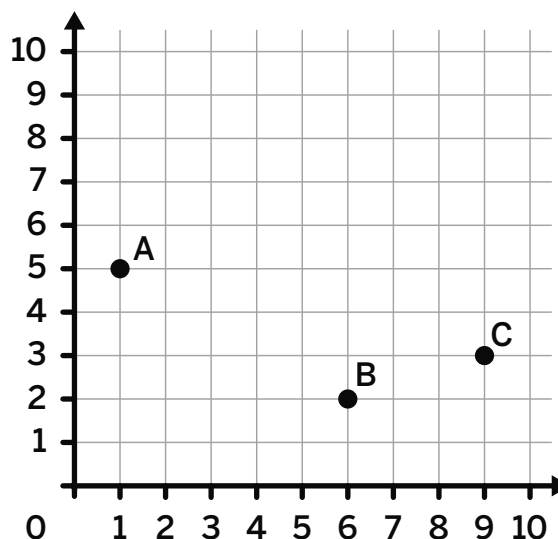
(1, ____)

5. point B

6 units right, then up 2 units

(____, ____)

6. point C



Check

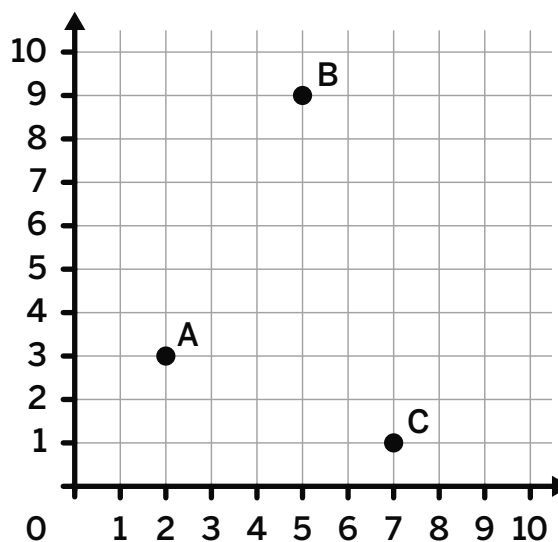


Use only numbers to describe the location of each given point.

1. point A

2. point B

3. point C



Plotting Points on the Coordinate Grid

ML 7.07



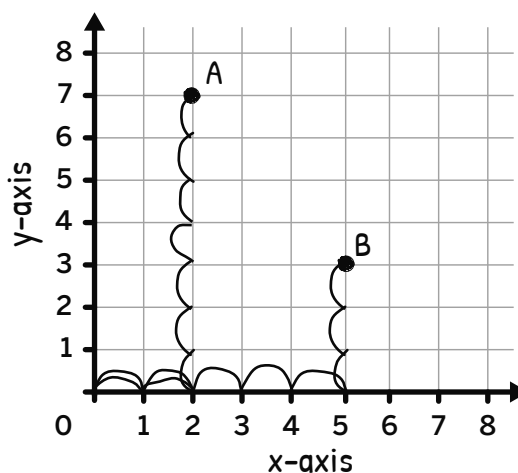
Modeled Review

Name: Eva

Plot and label each point on the coordinate grid.

Point	Ordered pair
A	(2, 7)
B	(5, 3)

(x, y)
→, ↑

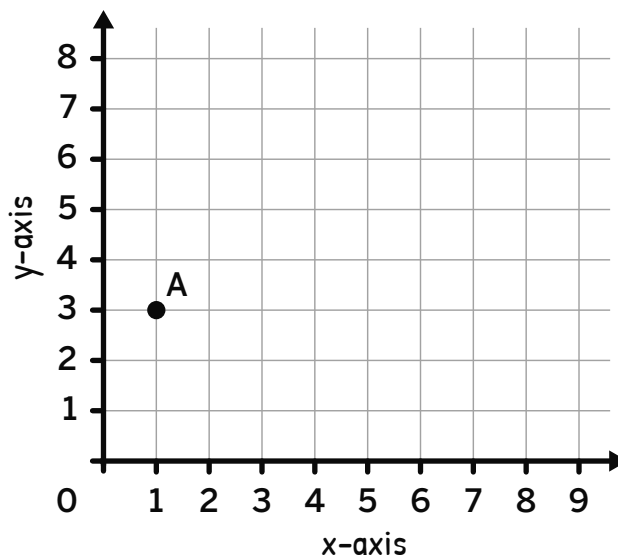


Guided Practice



- Use the information in the table to plot and label each point on the coordinate grid.

Point	Ordered pair (x, y)	Directions from origin →, ↑
A	(1, 3)	1 unit right, up 3 units
B	(3, 7)	3 units right, up 7 units
C	(5, 6)	5 units right, up 6 units
D	(8, 2)	8 units right, up 2 units



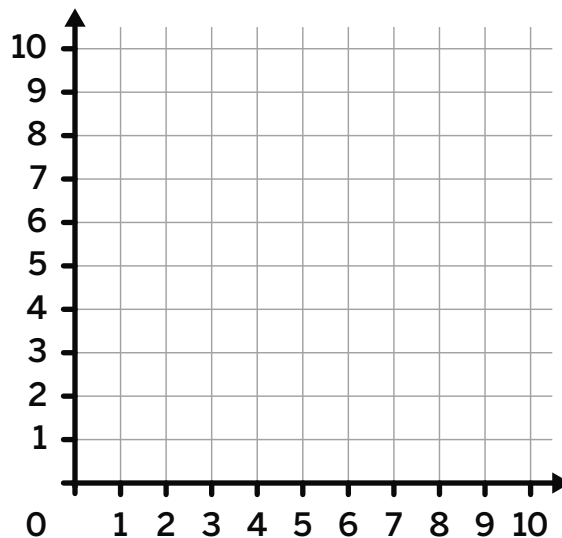


Guided Practice



2. Plot and label each point on the coordinate grid.

Point	Ordered pair
A	(1, 5)
B	(2, 3)
C	(7, 1)
D	(6, 4)

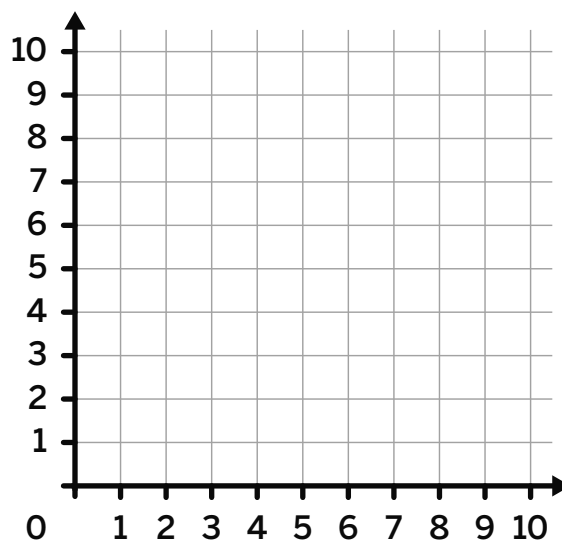


Check



Plot and label each point on the coordinate grid.

Point	Ordered pair
A	(4, 8)
B	(5, 2)



Plotting Points on Lines

ML 7.08

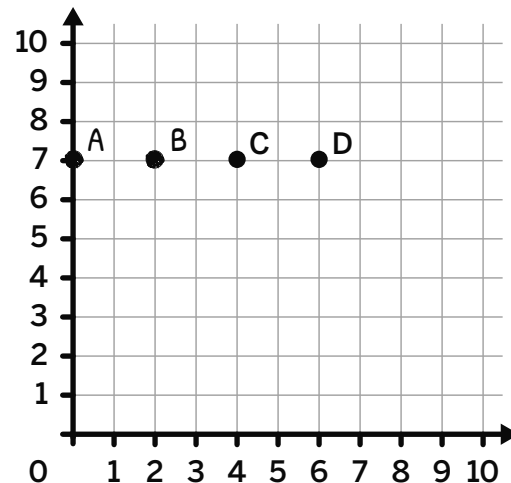


Modeled Review

Name: Diego

Plot and label points *A* and *B* on the coordinate grid. Then, identify the ordered pairs of points *C* and *D*.

Point	Ordered pair
<i>A</i>	$(0, 7)$
<i>B</i>	$(2, 7)$
<i>C</i>	$(4, 7)$
<i>D</i>	$(6, 7)$

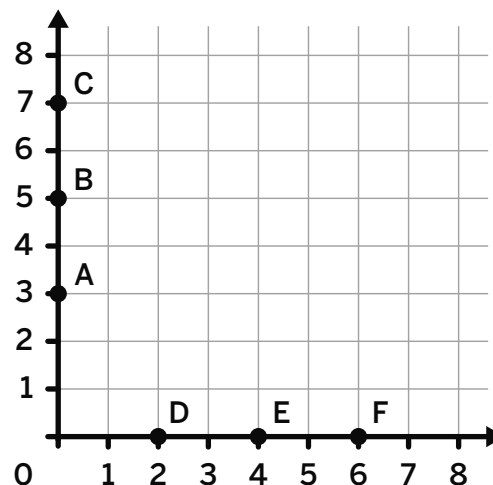


Guided Practice



1. Identify the ordered pair for each point on the coordinate grid.

Point	Ordered pair
<i>A</i>	$(0, \underline{\quad})$
<i>B</i>	$(\underline{\quad}, 5)$
<i>C</i>	$(\underline{\quad}, \underline{\quad})$
<i>D</i>	$(2, \underline{\quad})$
<i>E</i>	
<i>F</i>	



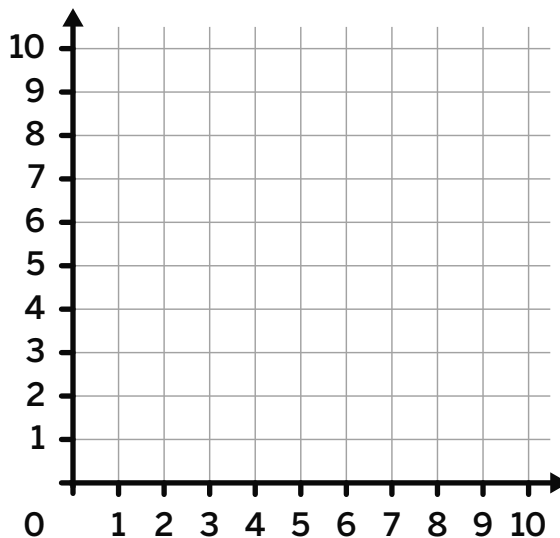


Guided Practice



2. Plot and label the points on the coordinate grid.

Point	Ordered pair
<i>A</i>	(0, 0)
<i>B</i>	(2, 0)
<i>C</i>	(4, 0)
<i>D</i>	(6, 0)
<i>E</i>	(6, 2)
<i>F</i>	(6, 4)

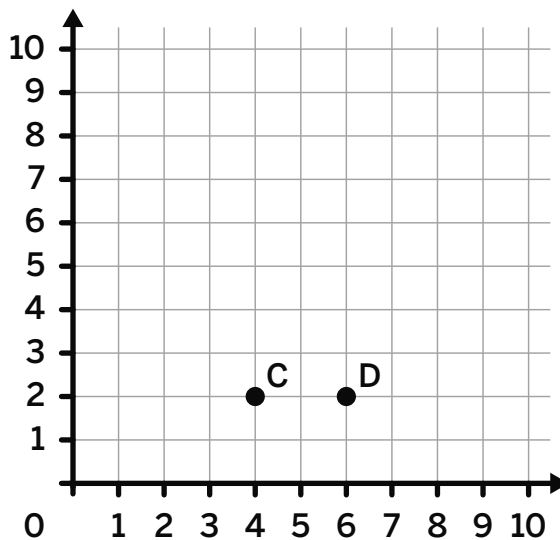


Check



Plot and label points *A* and *B* on the coordinate grid. Then, identify the ordered pairs of points *C* and *D*.

Point	Ordered pair
<i>A</i>	(0, 2)
<i>B</i>	(2, 2)
<i>C</i>	
<i>D</i>	



Determining Relationships Between Rules

ML 7.09



Modeled Review

Name: Jada

1. Use the rules to complete the table.

Rule 1: Start with 0 and keep adding 9.

Rule 2: Start with 0 and keep adding 3.

Rule 1	0	9 $\times 3 = 27$ 18	27	36	45
Rule 2	0	$\div 3$ 3	$\div 3$ 6	$\div 3$ 9	$\div 3$ 12

2. Describe the relationship between the numbers in Rule 1 and Rule 2.

Divide the number in Rule 1 by 3.



Guided Practice



1. Use the rules to complete each table.

Rule 1: Start with 0 and keep adding 5.

Rule 2: Start with 0 and keep adding 10.

Rule 1	0	5	10				
Rule 2							

2. **Discuss:** How could you describe the relationship between the numbers in Rule 1 and Rule 2?



Guided Practice



3. Use the rules to complete the table.

Rule 1: Start with 0 and keep adding 8.

Rule 2: Start with 0 and keep adding 2.

Rule 1						
Rule 2						

4. Describe the relationship between the numbers in Rule 1 and Rule 2.



Check



1. Use the rules to complete the table.

Rule 1: Start with 0 and keep adding 6.

Rule 2: Start with 0 and keep adding 12.

Rule 1						
Rule 2						

2. Describe the relationship between the numbers in Rule 1 and Rule 2.

Representing Relationships Between Patterns

ML 7.10



Modeled Review

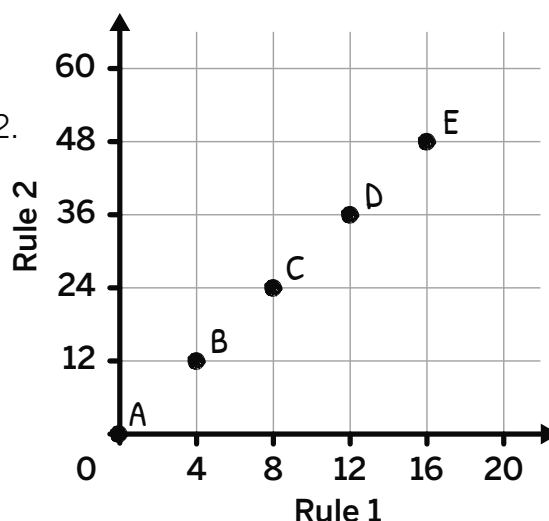
Name: Maya

Use the rules to generate two patterns. Then plot and label each point on the coordinate grid.

Rule 1: Start with 0 and keep adding 4.

Rule 2: Start with 0 and keep adding 12.

	A	B	C	D	E
Rule 1:	0	4	8	12	16
Rule 2:	0	12	24	36	48



Guided Practice

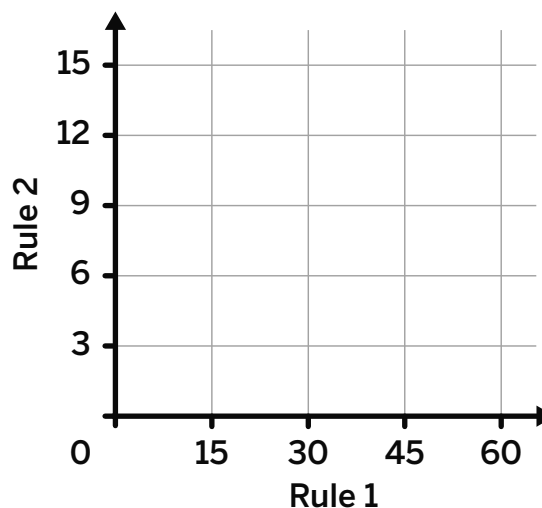


- Each pair of corresponding terms represents an ordered pair. Use the table to plot and label each point.

Rule 1: Start at 0 and keep adding 15.

Rule 2: Start at 0 and keep adding 3.

	A	B	C	D
Rule 1:	0	15	30	45
Rule 2:	0	3	6	9
Ordered pair	(0, 0)	(15, 3)	(30, 6)	(45, 9)





Guided Practice

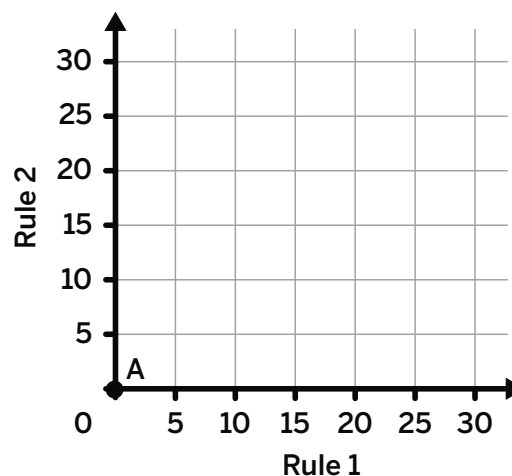


Use the rules to generate two patterns. Then plot and label each point on the coordinate grid.

2. **Rule 1:** Start with 0 and keep adding 5.

Rule 2: Start with 0 and keep adding 10.

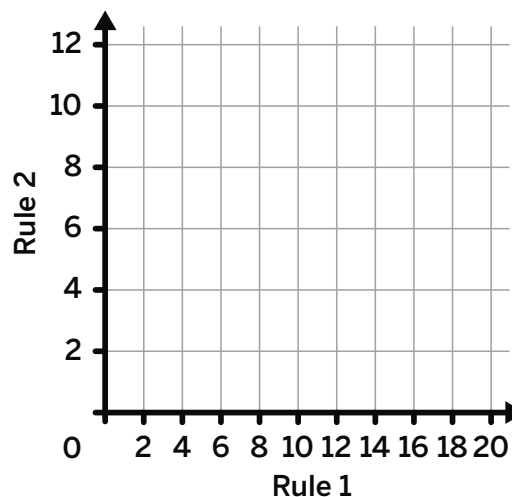
	A	B	C	D
Rule 1:	0	5		
Rule 2:	0	10		
Ordered pair	(0, 0)	(5, 10)		



3. **Rule 1:** Start with 0 and keep adding 6.

Rule 2: Start with 0 and keep adding 2.

	A	B	C	D
Rule 1:				
Rule 2:				



Check

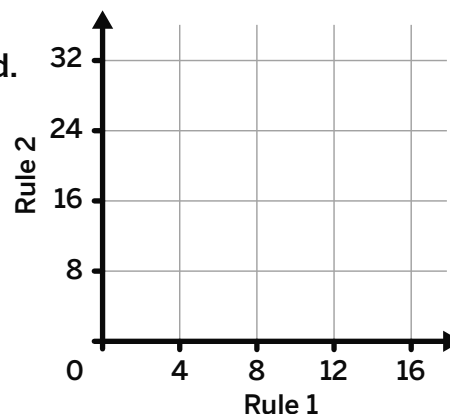


Use the rules to generate two patterns. Then plot and label each point on the coordinate grid.

Rule 1: Start with 0 and keep adding 4.

Rule 2: Start with 0 and keep adding 8.

	A	B	C	D
Rule 1:				
Rule 2:				



Representing Data on the Coordinate Grid

ML 7.11



Modeled Review

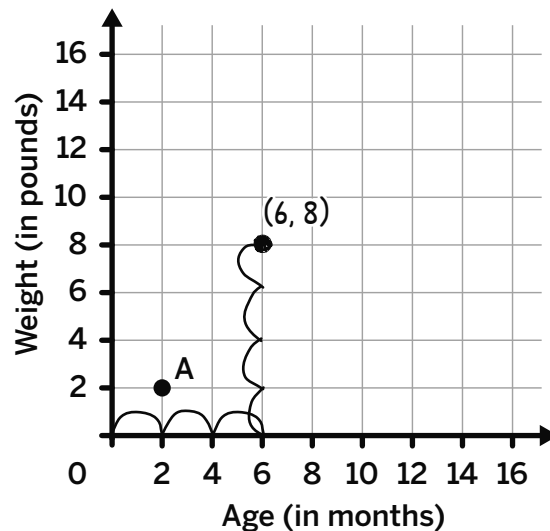
Name: Han

The graph shows the weight of a small dog as it grew. Use the graph for Problems 1–2.

1. What does point A represent?

When the dog was two months old, it weighed 2 pounds.

2. Plot a point on the coordinate grid to show that the dog weighed 8 pounds at 6 months. Label the point with its ordered pair.



Guided Practice



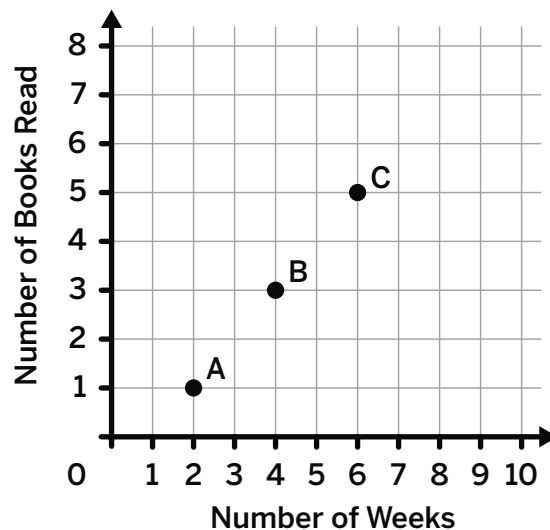
The graph shows the number of books Maya read over a 10 week period.

1. What does point A represent?

- A. It takes Maya 1 week to read 2 books.
B. It takes Maya 2 weeks to read 1 book.

2. What does point C represent?

- A. It takes Maya 6 weeks to read 5 books.
B. It takes Maya 5 weeks to read 6 books.





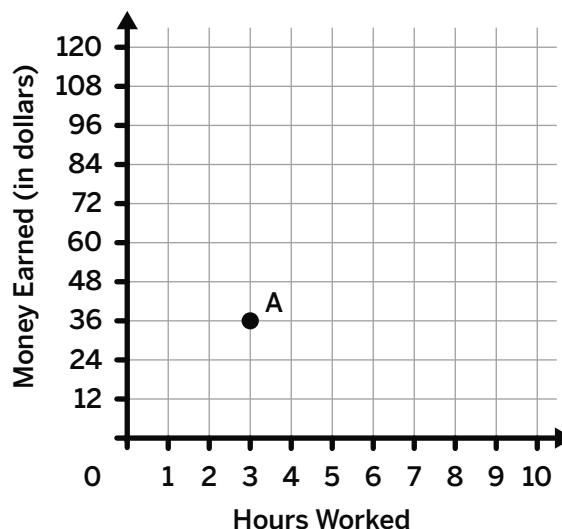
Guided Practice



The graph shows the amount of money earned for every hour a student worked after school. Use the graph for Problems 3–4.

3. What does point A represent?

4. Plot points on the coordinate grid to show that a student makes \$60 in 5 hours and \$96 after working 8 hours. Label each point with its ordered pair.



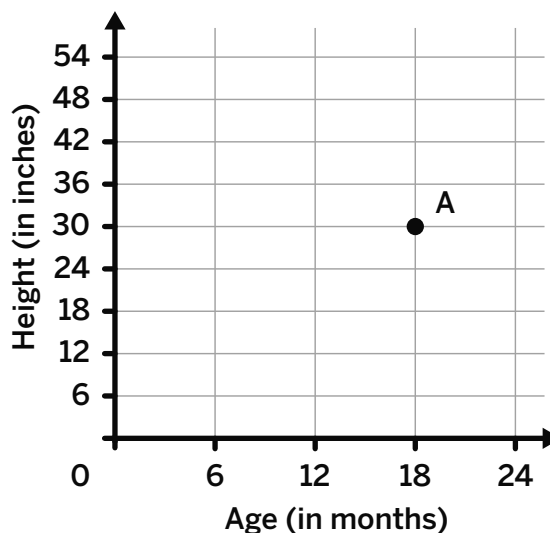
Check



The graph shows the height of a child from birth to two years. Use the graph for Problems 1–2.

1. What does point A represent?

2. Plot a point on the coordinate grid to show that the child is 24 inches at 6 months. Label the point with its ordered pair.



Interpreting Graphs of Relationships

ML 7.12



Modeled Review

Name: Clare

The graph shows the amount of flour per serving of pumpkin bread. Use the graph to answer the questions.

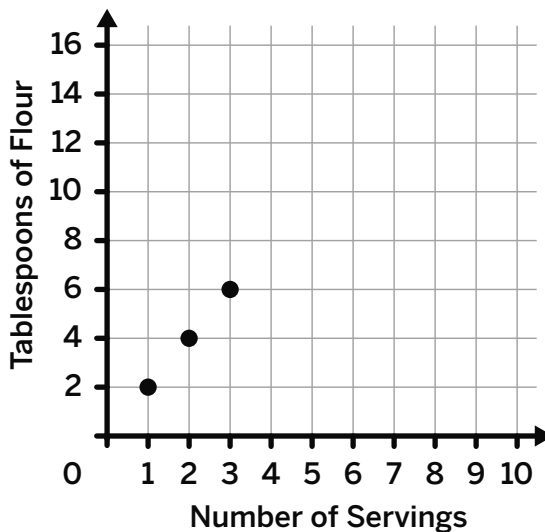
1. There are 4 tablespoons of flour in 3 servings of pumpkin bread. Do you agree or disagree?

I disagree. The graph shows there are 6 tablespoons of flour for 3 servings.

2. How many tablespoons of flour are in 6 servings?

1 serving = 2 tablespoons of flour
6 servings = ? tablespoons of flour
 $6 \times 2 = 12$

answer: 12 tablespoons

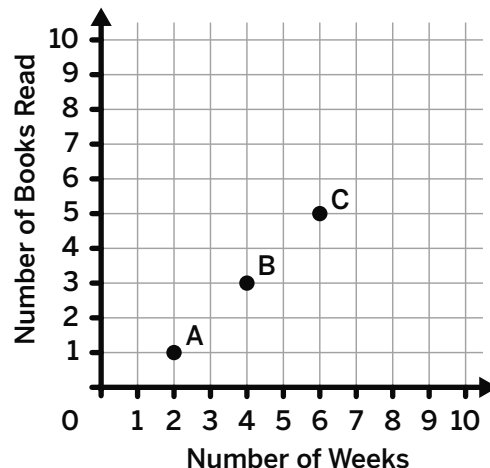


Guided Practice



Discuss whether you agree or disagree with each statement. Use the graph to explain your thinking.

- Point B represents reading 4 books in 3 weeks.
- Point C represents 5 books read in 6 weeks.
- It takes a week to finish 2 books.





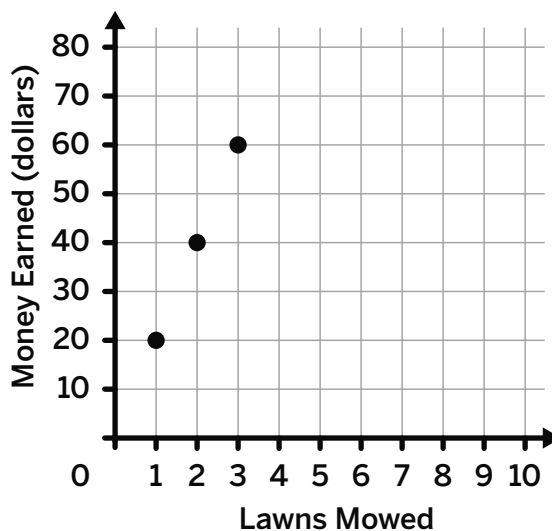
Guided Practice



Diego is mowing lawns to save money for a new skateboard. Use the graph to answer the questions.

4. Diego earns \$40 for mowing two lawns. Do you agree or disagree?

5. Diego's goal is to save \$80. How many lawns does he need to mow to meet his goal?



answer: _____



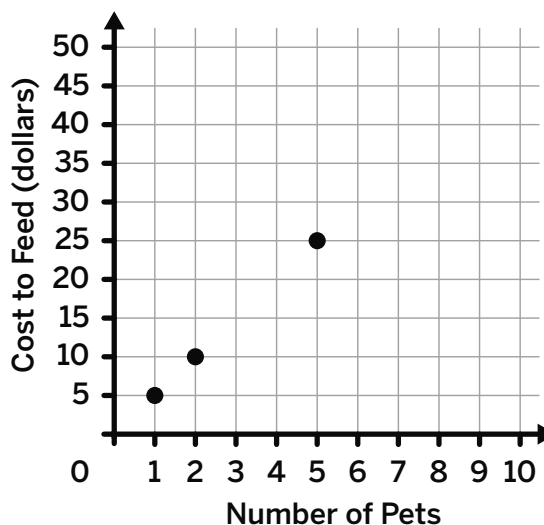
Check



The graph shows the cost to feed pets at a pet resort. Use the graph to answer the questions.

1. It costs \$30 to feed 5 pets. Do you agree or disagree?

2. How much does it cost to feed 9 pets?



answer: _____

Prerequisite Skills and Concepts

Mini-Lessons

Finding the Area of Rectangles Without a Grid

ML 2.07

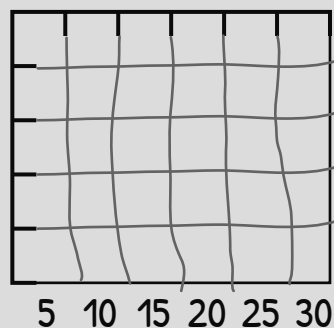


Modeled Review

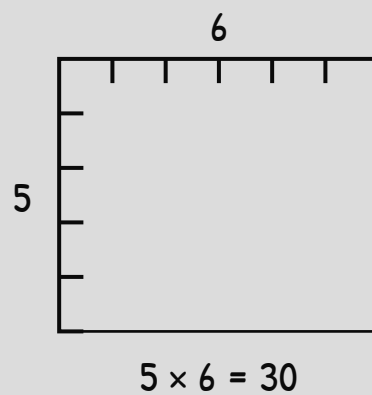


Dylan and Avery correctly found the area using different methods. Study each of their work.

Dylan's Work



Avery's Work

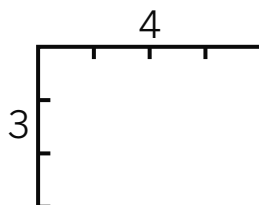


Guided Practice



The space between two tick marks represents 1 foot. Determine the area of each rectangle.

1.



$$3 \times 4 = \underline{\quad\quad} \text{ square feet}$$

2.



$$\underline{\quad\quad} \times \underline{\quad\quad} = \underline{\quad\quad}$$

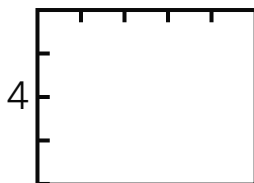


Guided Practice



The space between two tick marks represents 1 inch. Determine the area of each rectangle.

3.



expression: _____

area: _____

4.



expression: _____

area: _____

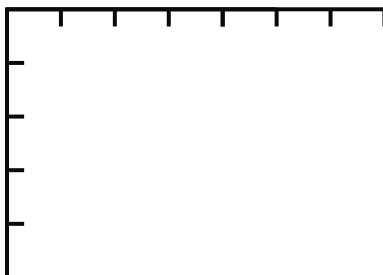


Check



The space between two tick marks represents 1 foot. Determine the area of each rectangle.

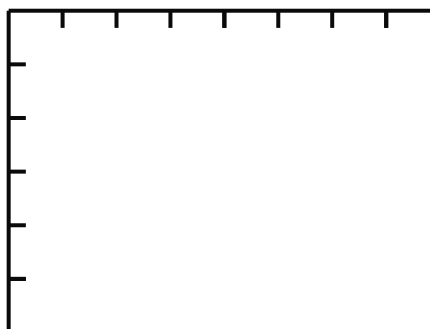
1.



expression: _____

area: _____

2.



expression: _____

area: _____

Finding Area of Rectilinear Figures

ML 2.10



Modeled Review

Name: Tristan

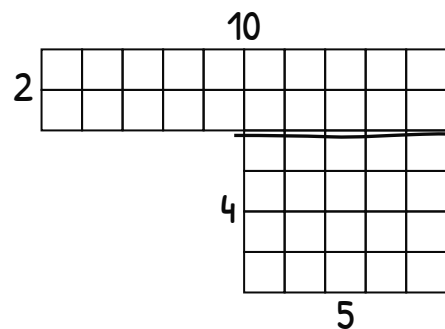
Determine the area of the figure. Each small square represents an area of 1 square inch. Show or explain your thinking.

$$\text{rectangle 1: } 2 \times 10 = 20$$

$$\text{rectangle 2: } 4 \times 5 = 20$$

$$20 + 20 = 40$$

answer: 40 square inches

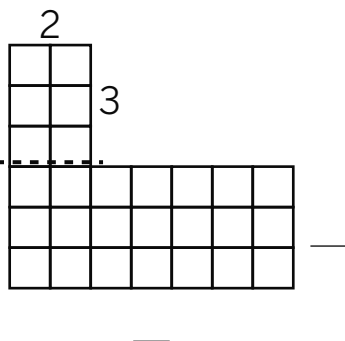


Guided Practice

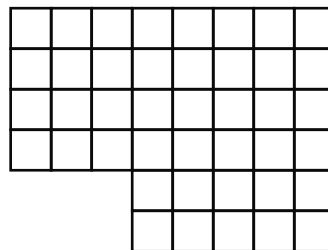


Draw lines to decompose each figure into rectangles. Then label the side lengths of each rectangle.

1.



2.



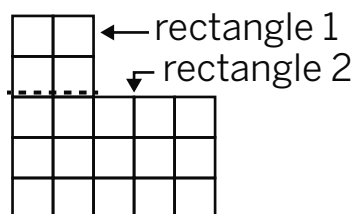


Guided Practice



Determine the area of the figure. Each small square represents an area of 1 square unit. Show or explain your thinking.

3.



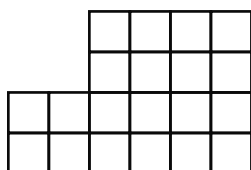
rectangle 1: $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

rectangle 2: $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

total area: $\underline{\quad} + \underline{\quad} = \underline{\quad}$

answer: $\underline{\quad}$ square units

4.



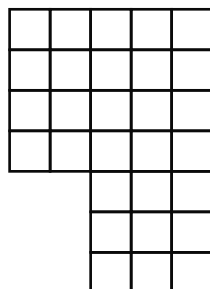
answer: $\underline{\hspace{2cm}}$



Check



Determine the area of the figure. Each small square represents an area of 1 square unit. Show or explain your thinking.



answer: $\underline{\hspace{2cm}}$

Finding Area of Rectilinear Figures With Unknown Side Lengths

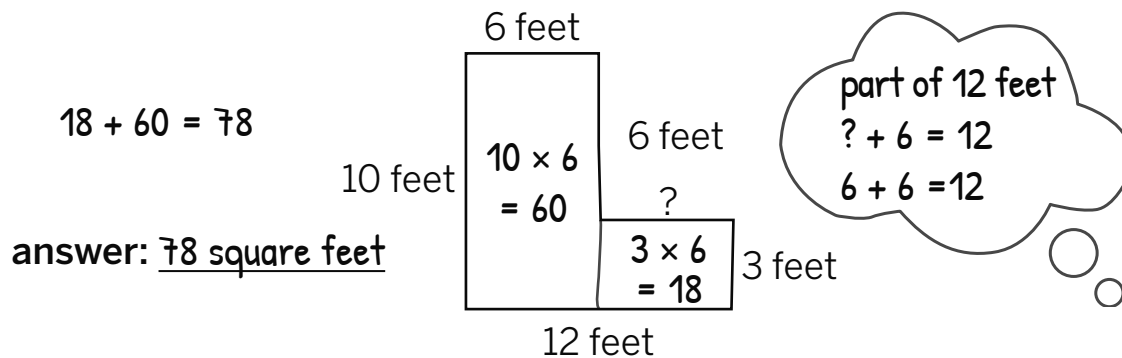
ML 2.12



Modeled Review

Name: Avery

Determine the area of the figure. Show or explain your thinking.

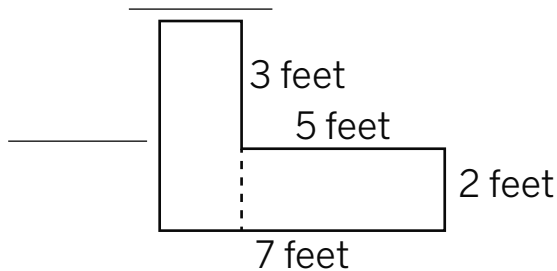


Guided Practice

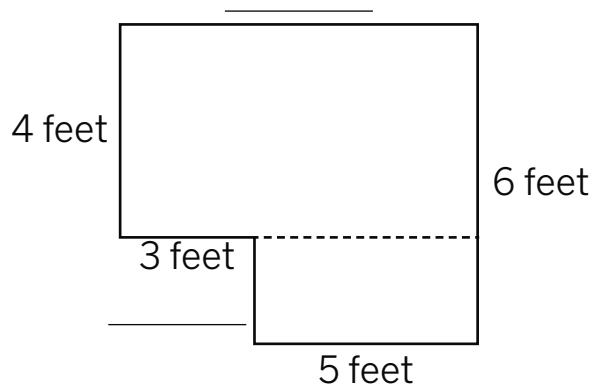


A dotted line shows how the figure could be split into two rectangles. Determine the unknown side lengths.

1.



2.



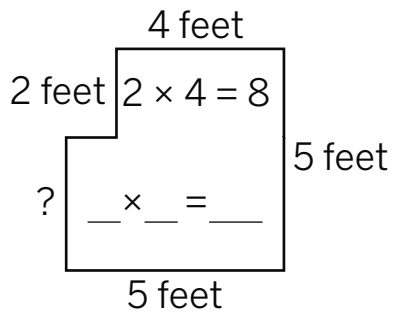


Guided Practice



Determine the area of the figure. Show or explain your thinking.

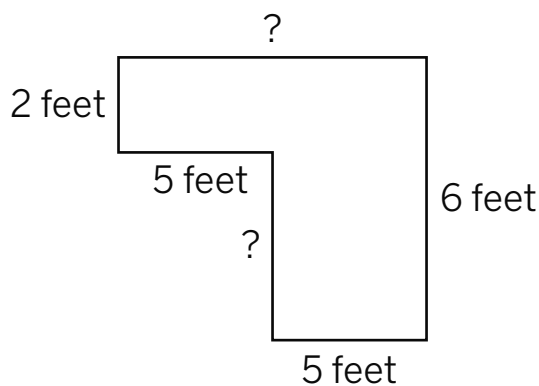
3.



total area: 8 + =

answer: square feet

4.



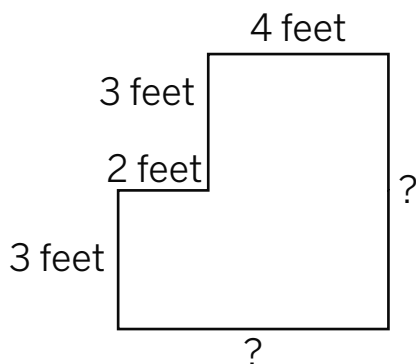
answer:



Check



Determine the area of the figure. Show or explain your thinking.



answer:

Identifying Non-Unit Fractions

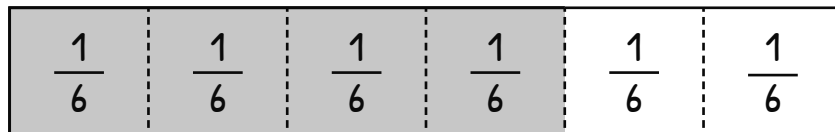
ML 5.04



Modeled Review

Name: Dylan

The rectangle represents one whole. What fraction of the rectangle is shaded? Explain your thinking.



answer: $\frac{4}{6}$

4 parts are shaded.



Guided Practice



- Use the diagrams to complete the table. Each rectangle represents one whole.

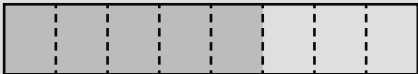
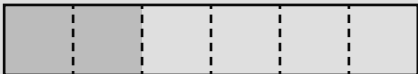



Diagram	Unit fraction	Number of shaded parts	Fraction that is shaded
			$\frac{2}{4}$
	$\frac{1}{4}$		$\frac{7}{4}$



Guided Practice



2. Use the diagrams to complete the table. Each rectangle represents one whole.

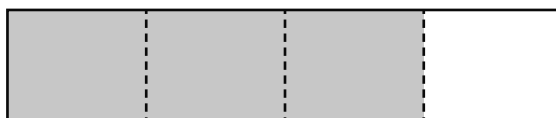
Diagram	Unit fraction	Number of shaded parts	Fraction that is shaded
	$\frac{1}{8}$		
			
			
			
			



Check



The rectangle represents one whole. What fraction of the rectangle is shaded? Explain your thinking.



answer: _____

Generating Number Patterns

ML 1.03



Modeled Review

Name: Kai

Use the given rule to generate the next 4 numbers in each pattern. The first number is provided.

1. Rule: Add 4

2, 6, 10, 14, 18

2. Rule: Multiply by 2

10, 20, 40, 80, 160



Guided Practice



Use the given rule to generate the next numbers in the pattern.

1. Rule: Add 3

3, 6, 9, _____, _____, _____

2. Rule: Add 4

8, 12, _____, _____, _____, _____

3. Rule: Add 6

18, _____, _____, _____, _____, _____



Guided Practice



Use the given rule to generate the next numbers in the pattern.

4. Rule: Multiply by 2

_____ 4 _____, _____ 8 _____, _____ 16 _____, _____, _____

5. Rule: Multiply by 5

_____ 2 _____, _____ 10 _____, _____, _____, _____

6. Rule: Multiply by 10

_____ 3 _____, _____, _____, _____, _____



Check



Use the given rule to generate the next numbers in the pattern.

1. Rule: Add 5

_____ 10 _____, _____, _____, _____, _____

2. Rule: Multiply by 3

_____ 2 _____, _____, _____, _____, _____

Identifying Numbers Using Factors, Multiples, and Prime and Composite Numbers

ML 1.11



Modeled Review

Name: Maya

Identify the mystery number from the number bank, using the following clues.

5	21	10	35
--------------	---------------	---------------	----

- The number is composite.
- 7 is a factor of the number.
- The number is a multiple of 5.

mystery number: 35

21, 10, and 35 are composite.

7 is a factor of 21 and 35.

21 is not a multiple of 5, so
35 is the mystery number!

Guided Practice



Use the number bank for Problems 1–4. Each number can be used more than once.

40	23	16	13	37	34
----	----	----	----	----	----

1. List all the composite numbers.
40, 16, _____
2. List all the prime numbers.
23, _____, _____
3. List all the numbers for which 8 is a factor.
16, _____
4. List all the numbers that are multiples of 2.
_____, _____, _____



Guided Practice



5. Determine if each number is a multiple of 4, a factor of 48, neither, or both. Place a check mark in each correct column.

Number	Multiple of 4	Factor of 48
12	✓	✓
36	✓	
14		
24		

Identify which of the numbers in the number bank are the mystery number for each of the following lists.

49	15	22	33	72
----	----	----	----	----

6. • The number is composite.
• The number is a multiple of 5.
• 3 is a factor of the number.
7. • The number is composite.
• The number is a multiple of 11.
• 3 is a factor of the number.

mystery number: _____

mystery number: _____



Check



Identify which number in the number bank is the mystery number for the following list.

64	6	36	17
----	---	----	----

- The number is composite.
- 3 is a factor of the number.
- The number is a multiple of 9.

mystery number: _____

Representing Unit Fractions on Fraction Strip Diagrams

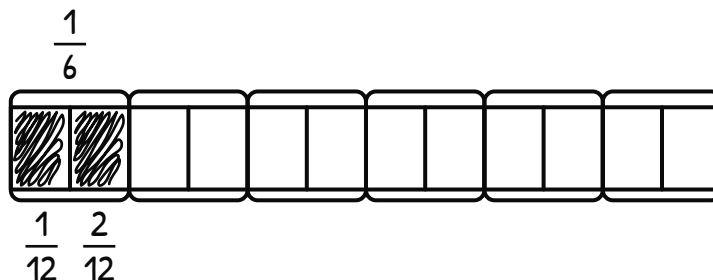
ML 2.02



Modeled Review

Name: Avery

The fraction-strip represents 1 whole. Shade the fraction-strip diagram to represent the fraction $\frac{1}{6}$.

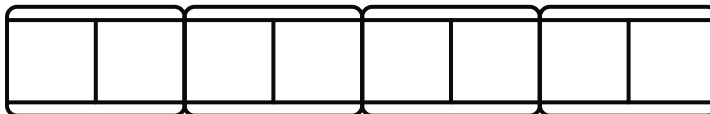


Guided Practice



Each fraction-strip diagram represents 1 whole.

1. Shade the fraction-strip diagram to represent the fraction $\frac{1}{4}$.



2. Shade the fraction-strip diagram to represent the fraction $\frac{1}{2}$.



3. Shade the fraction-strip diagram to represent the fraction $\frac{1}{3}$.





Guided Practice



Each fraction-strip diagram represents 1 whole.

4. Shade the fraction-strip diagram to represent the fraction $\frac{1}{8}$.



5. Shade the fraction-strip diagram to represent the fraction $\frac{1}{6}$.



6. Shade the fraction-strip diagram to represent the fraction $\frac{1}{4}$.



7. Shade the fraction-strip diagram to represent the fraction $\frac{1}{12}$.



Check

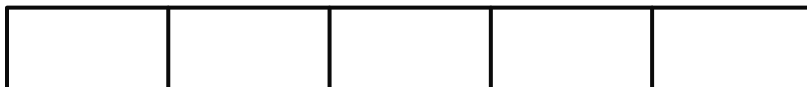


Each fraction-strip diagram represents 1 whole.

1. Shade the fraction-strip diagram to represent the fraction $\frac{1}{5}$.



2. Shade the fraction-strip diagram to represent the fraction $\frac{1}{10}$.



Writing Equivalent Fractions Using Factors and Multiples

ML 2.09



Modeled Review

Name: Tristan

1. Use multiples to write *two* different fractions that are equivalent to $\frac{2}{3}$.

$$\frac{2 \times 3}{3 \times 3} = \frac{6}{9}$$

$$\frac{2 \times 4}{3 \times 4} = \frac{8}{12}$$

2. Use factors to write *two* different fractions that are equivalent to $\frac{10}{20}$.

$$\frac{10 \div 5}{20 \div 5} = \frac{2}{4}$$

$$\frac{10 \div 2}{20 \div 2} = \frac{5}{10}$$



Guided Practice



1. Use multiples to write *three* different fractions that are equivalent to $\frac{3}{8}$.

$$\frac{3 \times 2}{8 \times 2} = \underline{\hspace{2cm}}$$

$$\frac{3 \times 3}{8 \times 3} = \underline{\hspace{2cm}}$$

$$\frac{3 \times \quad}{8 \times \quad} = \underline{\hspace{2cm}}$$

2. Use multiples to write *three* different fractions that are equivalent to $\frac{5}{12}$.

$$\frac{\quad \times}{\quad \times} = \underline{\hspace{2cm}}$$

$$\frac{\quad \times}{\quad \times} = \underline{\hspace{2cm}}$$



Guided Practice



3. Use factors to write *three* different fractions that are equivalent to $\frac{12}{48}$.

$$\frac{12 \div 2}{48 \div 2} = \underline{\hspace{2cm}}$$

$$\frac{12 \div 4}{48 \div 4} = \underline{\hspace{2cm}}$$

$$\frac{12 \div 6}{48 \div 6} = \underline{\hspace{2cm}}$$

4. Use factors to write *three* different equations that are equivalent to $\frac{60}{30}$.

$$\frac{\div}{\div} = \underline{\hspace{2cm}}$$

$$\frac{\div}{\div} = \underline{\hspace{2cm}}$$



Check



1. Use multiples to write *two* different fractions that are equivalent to $\frac{7}{6}$.

2. Use factors to write *two* different equations that are equivalent to $\frac{64}{72}$.

Decomposing Fractions to Add and Subtract

ML 3.07

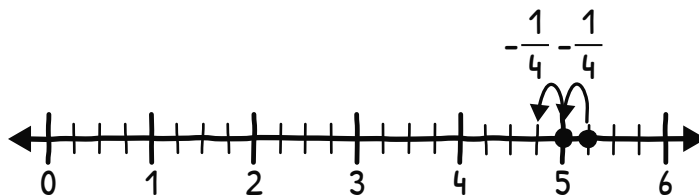


Modeled Review

Name: Tristan

Calculate the difference. Show your thinking.

$$5\frac{1}{4} - \frac{2}{4} = \underline{4\frac{3}{4}}$$



$$\begin{aligned} 5\frac{1}{4} - \frac{2}{4} \\ 5\frac{1}{4} - \frac{1}{4} = 5 \\ 5 - \frac{1}{4} = 4 + \frac{4}{4} - \frac{1}{4} \\ 4\frac{3}{4} \end{aligned}$$



Guided Practice



Calculate each sum. Show your thinking.

1. $2\frac{1}{8} + 3\frac{4}{8} = \underline{\hspace{2cm}}$

$$2\frac{1}{8} + 3 = 5\frac{1}{8}$$

$$5\frac{1}{8} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

2. $4\frac{3}{5} + 2\frac{1}{5} = \underline{\hspace{2cm}}$

$$4\frac{3}{5} + 2 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{1cm}} + \frac{1}{5} = \underline{\hspace{1cm}}$$

3. $5\frac{3}{7} + \frac{3}{7} = \underline{\hspace{2cm}}$

$$5\frac{3}{7} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

4. $8\frac{1}{6} + 1\frac{3}{6} = \underline{\hspace{2cm}}$



Guided Practice



Calculate each difference. Show your thinking.

5. $6\frac{1}{4} - 2\frac{3}{4} =$ _____

$$6\frac{1}{4} = 5 + \frac{4}{4} + \frac{1}{4}$$

$$5\frac{5}{4} - 2\frac{3}{4}$$

$$5 - 2 =$$

$$\frac{5}{4} - \frac{3}{4} =$$

6. $2\frac{3}{6} - 1\frac{4}{6} =$ _____

$$2\frac{3}{6} = 1 + \frac{\quad}{6} + \frac{\quad}{6}$$

$$\frac{\quad}{6} - 1\frac{4}{6}$$

$$\frac{\quad}{6}$$

7. $6 - \frac{2}{8} =$ _____

$$6 = \frac{\quad}{8} + \frac{\quad}{8}$$

8. $7\frac{4}{9} - 2\frac{8}{9} =$ _____



Check



Calculate each sum or difference. Show your thinking.

1. $2\frac{2}{6} + 1\frac{3}{6} =$ _____

2. $4 - 1\frac{4}{5} =$ _____

Connecting Descriptions, Diagrams, and Expressions for Groups of Fractions

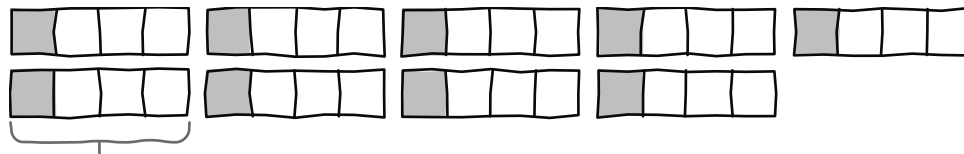
ML 3.08



Modeled Review

Name: Han

Jada had 9 plates. She put $\frac{1}{4}$ of a sandwich on each plate. Create a drawing and write an addition and multiplication expression to represent the situation.



addition expression: $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

multiplication expression: $9 \times \frac{1}{4}$



Guided Practice



Complete the diagram and write an addition and multiplication expression to represent each situation.

1. Clare had 7 plates. She put $\frac{1}{3}$ of a sandwich on each plate.

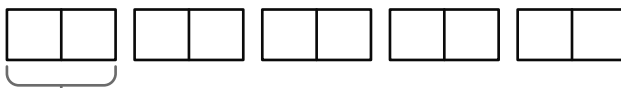


1 sandwich

addition expression: $\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

multiplication expression: _____

2. Diego had 5 plates. He put $\frac{1}{2}$ of a sandwich on each plate.



1 sandwich

addition expression: $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$

multiplication expression: _____



Guided Practice



Write an addition and multiplication expression to represent each situation.

3. Tristan had 8 plates. He put $\frac{1}{5}$ of a piece on each plate. How much pie did he put on the plates?

addition expression: _____

multiplication expression: _____

4. Eva scooped $\frac{1}{2}$ cup of oats 6 times. How many cups of oats did she scoop?

addition expression: _____

multiplication expression: _____



Check



Write an addition and multiplication expression to represent each situation.

1. Santiago had 4 plates. He put $\frac{1}{6}$ of a veggie pizza on each plate. How much of a veggie pizza did he put on the plates?

addition expression: _____

multiplication expression: _____

2. Jada poured $\frac{1}{3}$ cup of juice 8 times. How many cups of juice did she pour?

addition expression: _____

multiplication expression: _____

Multiplying Whole Numbers and Fractions

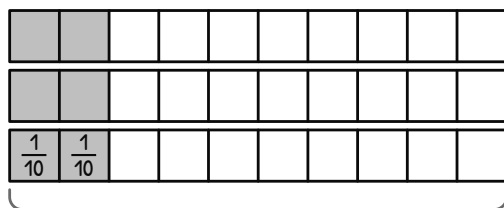
ML 3.10



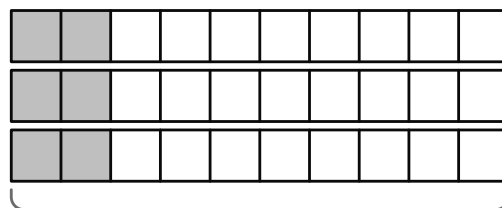
Modeled Review

Name: Santiago

Write a multiplication expression to represent the diagram. Then determine the product of the expression.



expression: $6 \times \frac{2}{10}$



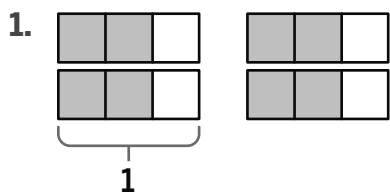
product: $\frac{12}{10}$



Guided Practice

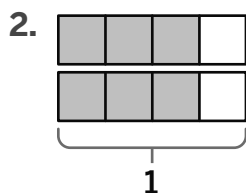


Write a multiplication expression to represent the diagram. Then determine the product of the expression.



expression: $4 \times \frac{2}{3}$

product: _____



expression: _____

product: _____



Guided Practice



Determine the product. Draw a diagram if it is helpful.

3. $4 \times \frac{1}{3} =$ _____

4. $6 \times \frac{3}{5} =$ _____

5. $2 \times \frac{3}{7} =$ _____

6. $3 \times \frac{4}{5} =$ _____



Check



Determine the product. Draw a diagram if it is helpful.

1. $5 \times \frac{2}{3} =$ _____

2. $3 \times \frac{2}{7} =$ _____

Applying Multiplication of Fractions to Real-World Problems

ML 3.12

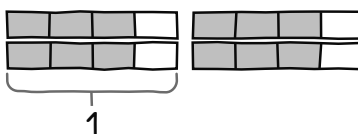


Modeled Review

Name: Han

Represent the situation with a model and an equation. Then write the answer.

Jada needs $\frac{3}{4}$ cup of blueberries for 1 batch of muffins. She wants to make 4 batches of blueberry muffins. How many cups of blueberries will Jada need?



equation: $4 \times \frac{3}{4} = \frac{12}{4}$

answer: $\frac{12}{4}$, so she needs 3 cups of blueberries.

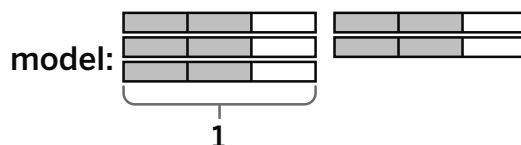


Guided Practice



Write an equation that matches the situation and model. Then write the answer.

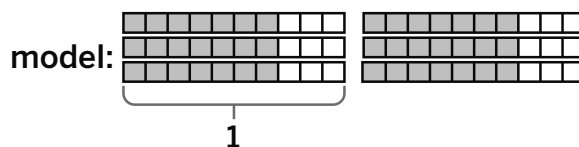
- Diego used $\frac{2}{3}$ of a cup of berries to make one batch of yogurt. How many cups are needed to make 5 batches?



equation: $\frac{2}{3} \times 5 =$ _____

answer: _____ cups

- Avery ran $\frac{7}{10}$ of a mile every day for 6 days. What is the total distance Avery ran over the 6 days?



equation: _____

answer: _____



Guided Practice



Represent each situation with a model and an equation. Then write the answer.

3. Jack used $\frac{1}{2}$ of a large onion to make one pot of soup. How many onions are needed to make 3 pots?

model:

equation: _____ answer: _____

4. A dentist spends $\frac{2}{3}$ of an hour to complete a teeth cleaning. If he has 4 cleanings scheduled, how many hours will it take?

model:

equation: _____ answer: _____

5. Clare runs $\frac{4}{5}$ of a mile every day for 5 days. What is the total distance she ran after 5 days?

model:

equation: _____ answer: _____



Check



Represent the situation with a model and an equation. Then write the answer.

Han swam $\frac{3}{4}$ of a kilometer every day for 5 days. What is the total distance Han swam over 5 days?

model:

equation: _____ answer: _____

Creating Line Plots

ML 3.15



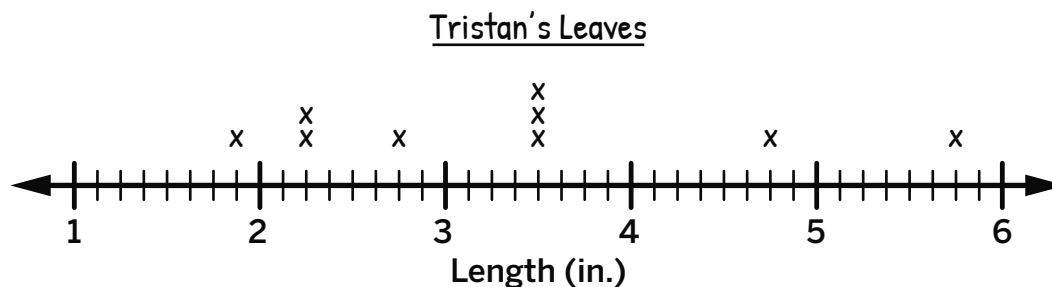
Modeled Review

Name: Avery

Tristan collected leaves that had fallen from the trees in the local park. He recorded the lengths of the leaves in inches.



Represent Tristan's data on the line plot. Include a title.



Guided Practice

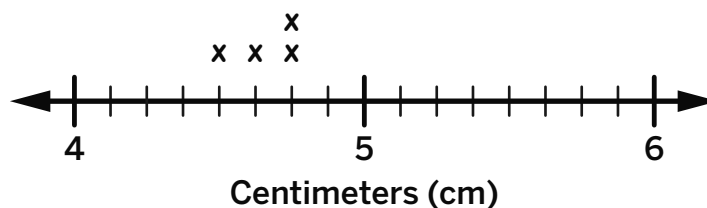


Complete the data on the line plot.

- Eva collected seashells and then measured each seashell in centimeters.



Eva's Seashells





Guided Practice

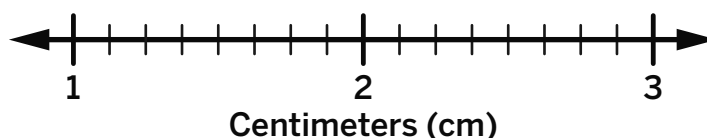


Represent the data on each line plot.

2. Diego collected caterpillars and then measured each caterpillar in centimeters.



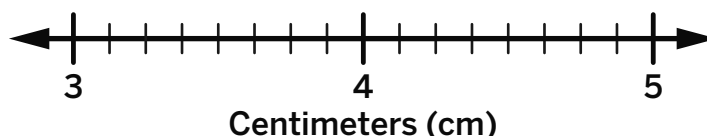
Diego's Caterpillars



3. Dylan collected pinecones and then measured each pinecone in centimeters.



Dylan's Pinecones



Check

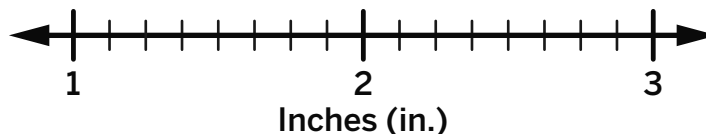


Represent the data on the line plot.

Clare collected butterflies and recorded their wingspan lengths in inches.



Clare's Butterflies



Comparing Decimals in Tenths and Hundredths

ML 4.05



Modeled Review

Name: Maya

Complete the comparison statements using $<$, $>$, or $=$.

1. 1.1 $=$ 1.10

2. 3.73 $<$ 3.83

3. 0.9 $>$ 0.19



Guided Practice



Decompose the numbers. Then complete the comparison statement using $<$, $>$, or $=$.

1. 2.3 5.4

$$\frac{2}{\text{whole number}} + \frac{3}{\text{tenths}} + \frac{0}{\text{hundredths}}$$

$$\frac{\quad}{\text{whole number}} + \frac{\quad}{\text{tenths}} + \frac{\quad}{\text{hundredths}}$$

2. 4.27 4.26

$$\frac{\quad}{\text{whole number}} + \frac{\quad}{\text{tenths}} + \frac{\quad}{\text{hundredths}}$$

$$\frac{\quad}{\text{whole number}} + \frac{\quad}{\text{tenths}} + \frac{\quad}{\text{hundredths}}$$



Guided Practice



Complete the comparison statement using $<$, $>$, or $=$.

3. 2.3 _____ 2.30

4. 6.25 _____ 6.28

5. 1.6 _____ 1.32

6. 4.20 _____ 4.2

7. 3.31 _____ 3.6

8. 5.29 _____ 5.23



Check



Complete the comparison statement using $<$, $>$, or $=$.

1. 6.38 _____ 6.31

2. 1.4 _____ 1.72

3. 3.3 _____ 3.30

Comparing and Ordering Decimals

ML 4.06



Modeled Review

Name: JackOrder the decimals from *least* to *greatest*.

1. 5.01, 5.1, 0.51

0.51 , 5.01 , 5.1

0.51 has 0 ones, so it is the least.
5.01 has 0 tenths and 5.1 has 1 tenth,
so 5.1 is the greatest.

2. 1.23, 1.32, 1.3

1.23 , 1.3 , 1.32

Guided Practice

Order the decimals from *least* to *greatest*.

1. 2.4 0.24 2.04

0.24 , _____ , _____

2. 3.24 3.42 3.4

_____ , _____ , 3.42

3. 1.12 1.2 1.02 1.21

1.02 , 1.12 , _____ , _____

4. 0.52 5.02 5.25 0.05

_____ , _____ , _____ , _____



Guided Practice



Order the decimals from *least* to *greatest*.

5. 1.03 0.31 3.10

_____, _____, _____

6. 4.52 2.45 5.42

_____, _____, _____

7. 2.32 2.23 2.2 2.25

_____, _____, _____, _____

8. 0.61 6.01 0.16 1.06

_____, _____, _____, _____



Check



Order the decimals from *least* to *greatest*.

1. 0.84 8.04 0.48 4.8

_____, _____, _____, _____

2. 0.17 1.07 1.71 0.71

_____, _____, _____, _____

Comparing Numbers in Standard and Expanded Form

ML 4.10



Modeled Review

Name: Avery**For Problems 1 and 2, determine the value of the digit in each statement.**1. What is the value of the 4 in 57,042? 402. What is the value of 4 in 39,412? 400

$$40 \times 10 = 400$$

3. Complete the sentence to show how the values of the digits are related.

400 is ten times the value of 40.

Guided Practice

**For Problems 1 and 2, determine the value of the digit in each statement.**1. What is the value of 3 in 62,134? 302. What is the value of 3 in 29,351?

3. Complete the sentence to show how the value of the digits are related.

 $30 \times 10 = \underline{\hspace{2cm}}$, so is 10 times the value of .**For Problems 4 and 5, determine the value of the digit in each statement.**4. What is the value of 5 in 84,537? 5. What is the value of 5 in 45,192?

6. Complete the sentence to show how the value of the digits are related.

 $\times 10 = \underline{\hspace{2cm}}$, so is 10 times the value of .



Guided Practice



Choose numbers from the number bank to make each statement true.

351,628

27,463

48,217

184,751

7. The 2 in 48,217 is ten times the value of the 2 in _____.

8. The 7 in _____ is ten times the value of the 7 in _____.

Choose numbers from the number bank to make each statement true.

546,198

30,220

59,741

763,071

9. The 5 in _____ is ten times the value of the 5 in _____.

10. The 3 in _____ is ten times the value of the 3 in _____.



Check



Choose numbers from the number bank to make each statement true.

294,136

72,452

623,514

31,392

1. The 5 in _____ is ten times the value of the 5 in _____.

2. The 1 in _____ is ten times the value of the 1 in _____.

Identifying Numbers Using Relationships Between Digits

ML 4.11



Modeled Review

Name: Avery

The 6 in 27,364 has 10 times the value of the 6 in which number?

- A. 46,751
- B. 65,280
- ☒ C. 13,426
- D. 92,603

The 6 in 27,364 is in the tens place, so it has a value of 60.

$$60 \div 10 = 6$$



Guided Practice



The value of the 5 in 34,567 is 500.

1. What is that value times 10? 5,000
2. Circle the number with that value. 5,784 56,783

The value of the 2 in 627,438 is 20,000.

3. What is that value times 10? _____
4. Circle the number with that value. 24,631 265,931



Guided Practice



For Problems 5 and 6, use the number 146,981.

5. What is the value of the 8? _____
6. What is that value times 10? _____
7. Circle the number with that value. 9,584 97,861
8. The 2 in 821,347 has 10 times the value of the 2 in which number?
 - A. 93,124
 - B. 475,269
 - C. 362,581
 - D. 84,312
9. The 7 in 748,931 has 10 times the value of the 7 in which number?
 - A. 379,814
 - B. 857,624
 - C. 216,379
 - D. 435,718



Check



1. The 4 in 92,458 has 10 times the value of the 4 in which number?
 - A. 14,367
 - B. 54,892
 - C. 21,475
 - D. 89,043
2. The 6 in 736,249 has 10 times the value of the 6 in which number?
 - A. 16,784
 - B. 462,591
 - C. 53,672
 - D. 92,467

Rounding Numbers

ML 4.14



Modeled Review

Name: Diego

1. Round $\overset{\curvearrowright}{1}74,528$ to the nearest 100,000. 200,000

174,528 is between 100,000 and 200,000, and it is closer to 200,000 because there is a 7 in the ten thousands place.

2. Round $1\overset{\curvearrowright}{7}4,528$ to the nearest 10,000. 170,000

174,528 is between 170,000 and 180,000, and it is closer to 170,000 because there is a 4 in the thousands place.



Guided Practice



Round each number to the given place value.

1. Round $\overset{\curvearrowright}{2}63,745$ to the nearest 10,000. _____

2. Round $\overset{\curvearrowright}{2}63,745$ to the nearest 100,000. _____

3. Round $7\overset{\curvearrowright}{2}8,304$ to the nearest 1,000. _____

4. Round $7\overset{\curvearrowright}{2}8,304$ to the nearest 10,000. _____

5. Round $7\overset{\curvearrowright}{2}8,304$ to the nearest 100,000. _____



Guided Practice



Round each number to the given place value.

6. Round 186,925 to the nearest 100,000. _____

7. Round 186,925 to the nearest 10,000. _____

8. Round 412,683 to the nearest 1,000. _____

9. Round 412,683 to the nearest 10,000. _____

10. Round 653,220 to the nearest 100,000. _____

11. Round 653,220 to the nearest 10,000. _____



Check



Round each number to the given place value.

1. Round 891,265 to the nearest 1,000. _____

2. Round 429,328 to the nearest 10,000. _____

3. Round 162,441 to the nearest 100,000. _____

Adding Using the Standard Algorithm

ML 4.17



Modeled Review

Name: Santiago

Determine the sum using the standard algorithm.

$$369 + 457$$

$$\begin{array}{r} 1 \quad 1 \\ 3 \quad 6 \quad 9 \\ + 4 \quad 5 \quad 7 \\ \hline 8 \quad 2 \quad 6 \end{array}$$

$9 + 7 = 16$. I put the 6 in the ones column and the 1 at the top of the tens column.



Guided Practice



Determine each sum using the standard algorithm.

1. $546 + 315$

$$\begin{array}{r} 1 \\ 5 \quad 4 \quad 6 \\ + 3 \quad 1 \quad 5 \\ \hline \boxed{} \quad 6 \quad 1 \end{array}$$

2. $253 + 174$

$$\begin{array}{r} \boxed{} \\ 2 \quad 5 \quad 3 \\ + 1 \quad 7 \quad 4 \\ \hline \boxed{} \quad \boxed{} \quad 7 \end{array}$$

3. $817 + 165$

$$\begin{array}{r} \boxed{} \\ 8 \quad 1 \quad 7 \\ + 1 \quad 6 \quad 5 \\ \hline \boxed{} \quad \boxed{} \quad \boxed{} \end{array}$$



4. $12,412 + 8,394$

5. $1,283 + 652$

6. $508 + 264$

7. $23,765 + 4,527$



$$34,375 + 2,816$$

Subtracting With Zeros Using the Standard Algorithm

ML 4.19



Modeled Review

Name: Han

Determine the difference using the standard algorithm.

$$1,509 - 287$$

		4	10	
	1,	5	0	9
-		2	8	7
	1,	2	2	2

There are 0 tens. I decomposed 1 hundred to get 10 tens. There are 4 hundreds left.



Guided Practice



Determine the difference using the standard algorithm.

1. $1,046 - 315$

		0	10	
	1	0	4	6
-		3	1	5
				1

2. $404 - 174$

		3	10	
	4	0	4	
-	1	7	4	
			0	

3. $1,097 - 165$

		1,	0	9	7
-			1	6	5



Guided Practice



Determine the difference using the standard algorithm.

4. $20,406 - 8,394$

5. $3,083 - 652$

6. $508 - 264$

7. $28,065 - 14,527$



Check



Determine the difference using the standard algorithm.

$$30,605 - 12,214$$

Converting Measurements From Meters to Centimeters

ML 5.08



Modeled Review

Name: Avery

An adult elephant grows to be approximately 4 meters tall. What is the height of the elephant in centimeters?

$$4 \times 100 = 400 \text{ centimeters}$$

$$1 \text{ meter} = 100 \text{ centimeters}$$

$$2 \text{ meters} = 200 \text{ centimeters}$$

$$3 \text{ meters} = 300 \text{ centimeters}$$

$$4 \text{ meters} = 400 \text{ centimeters}$$

answer: 400 centimeters



Guided Practice



Complete the conversions. Show your thinking.

1. $1 \text{ meter} = 100 \text{ centimeters}$

$$3 \text{ meters} = \underline{\hspace{2cm}} \text{ centimeters}$$

$$3 \times 100 = \underline{\hspace{2cm}}$$

2. $1 \text{ meter} = \underline{\hspace{2cm}} \text{ centimeters}$

$$9 \text{ meters} = \underline{\hspace{2cm}} \text{ centimeters}$$

3. $1 \text{ meter} = \underline{\hspace{2cm}} \text{ centimeters}$

$$12 \text{ meters} = \underline{\hspace{2cm}} \text{ centimeters}$$



Guided Practice



4. Complete the table of conversions.

Item	Measurement in meters (m)	Measurement in centimeters (cm)
length of a guitar	1	100
length of a bed	2	
length of a car	3	
height of a tree	4	
height of a giraffe	5	
height of a dinosaur	10	
height of a telephone pole	12	
length of an airplane	50	
length of a soccer field	100	



Check



Complete the conversion. Show your thinking.

Adult gray whales are approximately 14 meters long. How long is that in centimeters?

answer: _____

Converting Measurements From Kilometers to Meters

ML 5.09



Modeled Review

Name: Maya

Diego hiked 3 kilometers through Yosemite National Park. How far is that in meters?

$$3 \times 1,000 = 3,000$$

$$1 \text{ kilometer} = 1,000 \text{ meters}$$

$$2 \text{ kilometers} = 2,000 \text{ meters}$$

$$3 \text{ kilometers} = 3,000 \text{ meters}$$

answer: 3,000 meters



Guided Practice



Complete the conversions. Show your thinking.

1. 1 kilometer = 1,000 meters

2 kilometers = _____ meters

$$2 \times 1,000 = \underline{\hspace{2cm}}$$

2. 1 kilometer = _____ meters

6 kilometers = _____ meters

3. 1 kilometer = _____ meters

12 kilometers = _____ meters



Guided Practice



4. Complete the table of conversions.

Distance	Measurement in kilometers (km)	Measurement in meters (m)
walk around a pond	1	1,000
street in a neighborhood	2	
walk across a theme park	3	
distance of a foot race	5	
climb to the top of Mt. Everest	9	
walk across a small city	12	
width of the Grand Canyon	29	
distance in a marathon	42	
drive from Miami to Tampa	450	



Check



Complete the conversion. Show your thinking.

Tristan drove 200 kilometers from Philadelphia, Pennsylvania to Washington, DC. How far did he drive in meters?

answer: _____

Converting Measurements From Yards to Feet and Feet to Inches

ML 5.11



Modeled Review

Name: Avery

A toy car rolled 5 feet. How far did it roll in inches?

$$12 \times 5 = 60$$

$$1 \text{ foot} = 12 \text{ inches}$$

answer: 60 inches



Guided Practice



Complete the conversions. Show your thinking.

1. $1 \text{ foot} = 12 \text{ inches}$

$3 \text{ feet} = \underline{\quad} \text{ inches}$

$$3 \times 12 = \underline{\quad}$$

2. $1 \text{ foot} = \underline{\quad} \text{ inches}$

$4 \text{ feet} = \underline{\quad} \text{ inches}$

3. $1 \text{ yard} = 3 \text{ feet}$

$3 \text{ yards} = \underline{\quad} \text{ feet}$

$$3 \times 3 = \underline{\quad}$$

4. $1 \text{ yard} = \underline{\quad} \text{ feet}$

$6 \text{ yards} = \underline{\quad} \text{ feet}$



Guided Practice



Complete the conversions. Show your thinking.

5. A boat measures 5 feet long.
How long is that in inches?

answer: _____

6. A football was kicked 10 yards.
How far is that in feet?

answer: _____

7. A ladder measures 10 feet.
How long is that in inches?

answer: _____

8. A runner ran 25 yards in a race.
How far is that in feet?

answer: _____



Check



Complete the conversions. Show your thinking.

1. A ball rolled 4 feet. How far is that in inches?

answer: _____

2. The length of an airplane is 50 yards. How long is that in feet?

answer: _____

Converting Measurements From Liters to Milliliters

ML 5.13



Modeled Review

Name: Jack

Tristan has a can of red paint and a can of blue paint. There are 200 milliliters of red paint and 6 times as much blue paint. Does Tristan have more or less than 1 liter of blue paint?

blue paint = 6 times the amount of red

$$6 \times 200 \text{ milliliters}$$

$$6 \times 200 = 1,200 \text{ milliliters}$$

1,000 milliliters = 1 liter

Tristan has more than 1 liter of blue paint.



Guided Practice



Complete the conversions. Show your thinking.

1. 1 liter = 1,000 milliliters

3 liters = _____ milliliters

$$3 \times 1,000 = \underline{\hspace{2cm}}$$

2. 1 liter = _____ milliliters

5 liters = _____ milliliters

3. 1 liter = _____ milliliters

12 liters = _____ milliliters



Guided Practice



Solve each story problem. Show your thinking.

4. Eva's cup holds 500 milliliters of water to fill her fish bowl. She uses the cup 4 times to fill the bowl. Does the fish bowl have more or less than 1 liter of water in it?

$$500 \times 4 = \underline{\hspace{2cm}} \text{ milliliters}$$

$$1 \text{ liter} = 1,000 \text{ milliliters}$$

The fish bowl has than 1 liter.

5. Clare has 150 milliliters of apple juice. She has 3 times as much orange juice. Does she have more or less than 1 liter of orange juice?

Clare has than 1 liter.

6. Diego has some lemonade and some water. He has 400 milliliters of lemonade and 2 times as much water. Does he have more or less than 1 liter of water?

Diego has than 1 liter.



Check



Solve the story problem. Show your thinking.

Dylan collects 300 milliliters of rain in the rain gauge. He collects that amount 4 times. Is that more or less than 1 liter of rain?

Dylan has than 1 liter.

Converting Measurements From Kilograms to Grams

ML 5.14



Modeled Review

Name: Kai

A hedgehog weighs 300 grams. Do 4 hedgehogs weigh more or less than 1 kilogram?

$$4 \times 300 \text{ grams}$$

$$4 \times 300 = 1,200 \text{ grams}$$

4 hedgehogs weigh more than 1 kilogram.

1,000 grams = 1 kilogram



Guided Practice



Complete the conversions. Show your thinking.

1. 1 kilogram = 1,000 grams

3 kilograms = _____ grams

$$3 \times 1,000 = \underline{\hspace{2cm}}$$

2. 1 kilogram = _____ grams

6 kilograms = _____ grams

3. 1 kilogram = _____ grams

12 kilograms = _____ grams



Guided Practice



Solve each story problem. Show your thinking.

4. Eva has 2 rabbits that each weigh 800 grams. Do Eva's rabbits weigh more or less than 1 kilogram?

$$800 \times 2 = \underline{\hspace{2cm}} \text{ grams}$$

$$1 \text{ kilogram} = 1,000 \text{ grams}$$

Eva's rabbits weigh than 1 kilogram.

5. A dozen eggs weighs 600 grams. Would 3 dozen eggs weigh more or less than 1 kilogram?

3 dozen eggs weigh than 1 kilogram.

6. A baby chicken weighs 40 grams. Would 10 baby chickens weigh more or less than 1 kilogram?

10 baby chickens weigh than 1 kilogram.



Check



Solve the story problem. Show your thinking.

A gray squirrel weighs 400 grams. Would 2 squirrels weigh more or less than 1 kilogram?

2 squirrels would weigh than 1 kilogram.

Converting Measurements From Pounds to Ounces

ML 5.15



Modeled Review

Name: Jada

Jack has a 2-pound bag of oats. The muffin recipe he is making calls for 40 ounces of oats. Does Jack have enough oats?

$$2 \times 16 = 32 \text{ ounces of oats}$$

1 pound = 16 ounces

answer: No, Jack does not have enough oats.



Guided Practice



Complete the conversions. Show your thinking.

1. 1 pound = 16 ounces

3 pounds = _____ ounces

$$3 \times 16 = \underline{\hspace{2cm}}$$

2. 1 pound = _____ ounces

8 pounds = _____ ounces

3. 1 pound = _____ ounces

10 pounds = _____ ounces



Guided Practice



Solve each story problem. Show your thinking.

4. Priya is baking granola bars and needs 28 ounces of flour. She has a 2-pound bag of flour. Does Priya have enough flour?

$$\begin{array}{l} 1 \text{ pound} = 16 \text{ ounces} \\ 2 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \text{ ounces} \end{array}$$

Priya have enough flour.

5. A chef is preparing a pasta dish that needs 72 ounces of pasta. He has 4 pounds of pasta. Does he have enough to prepare the dish?

The chef have enough pasta.

6. A baker is making breakfast casserole. The recipe calls for 42 ounces of cheese. She has a 5 pound block of cheese. Does the baker have enough cheese to make the breakfast casserole?

The baker have enough cheese.



Check



Solve the story problem. Show your thinking.

Clare is preparing a meal that requires 32 ounces of rice. She has a 3 pound bag of rice. Does Clare have enough rice for her meal?

Clare have enough rice.

Applying Measurement Conversions to Compare Different Units

ML 5.17



Modeled Review

Name: Tristan

Use measurement conversion and compare using $<$, $>$, or $=$ to solve the problem. Show your thinking.

Dylan loves broccoli. Would he rather have 2 pounds or 30 ounces of broccoli?

$$1 \text{ pound} = 16 \text{ ounces}$$

$$2 \times 16 = 32 \text{ ounces}$$

$$2 \text{ pounds} > 30 \text{ ounces}$$

Dylan would rather have 2 pounds of broccoli.



Guided Practice



Use measurement conversion and compare using $<$, $>$, or $=$ to solve each problem.

1. Clare does not like running. Would she rather run down a 2 kilometer trail or a 3,000 meter trail?

$$1 \text{ kilometer} = 1,000 \text{ meters}$$

$$2 \times 1,000 = \underline{\hspace{2cm}} \text{ meters}$$

$$2 \text{ kilometers} \underline{\hspace{1cm}} 3,000 \text{ meters}$$

Clare would rather run down a 2 kilometer trail.

2. Han enjoys running long distances. Would he rather run on a course that is 1,000 yards long or 900 feet long?

$$1 \text{ yard} = 3 \text{ feet}$$

$$1,000 \times 3 = \underline{\hspace{2cm}}$$

Han would rather run on a course that is 3,000 feet long.



Guided Practice



Use measurement conversion to solve each problem.

3. Maya wants to make a large batch of strawberry jam. Would she rather have 60 ounces or 4 pounds of strawberries to make the jam?

Maya would rather have _____ of strawberries.

4. Diego is collecting milk from his dairy cows to sell at the market. Would he rather collect 1,500 milliliters or 15 liters?

Diego would rather collect _____ of milk.

5. Priya does not enjoy chores. Would she rather have 110 minutes of chores or 2 hours?

Priya would rather have _____ of chores.



Check



Use measurement conversion to solve the problem.

Santiago does not enjoy hiking. Would he rather hike a trail that is 14 kilometers or 15,000 meters?

Santiago would rather hike the _____ trail.

Estimating and Calculating Products

ML 6.04



Modeled Review

Name: Jack

1. What is an estimate for $5 \times 3,425$?

answer: 15,000

2. Calculate the product of $5 \times 3,425$? Show your thinking.

$$15,000 + 2,000 + 100 + 25 = 17,125$$

answer: 17,125

	3,000	400	20	5
5	15,000	2,000	100	25



Guided Practice



Estimate each product and determine the answer. Show your thinking.

1. $3,124 \times 6$

estimate: $6 \times$ _____ = _____

	3,000	100	20	4
6	18,000	600	_____	_____

$$18,000 + 600 + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$

answer: _____

2. $4 \times 2,235$

estimate: $4 \times$ _____ = _____

	2,000	200	30	5
4	_____	_____	_____	_____

answer: _____



Guided Practice



Estimate each product and determine the answer. Show your thinking.

3. $6,437 \times 5$

estimate: $5 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

	6,000	400	30	7
5	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>
	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

answer: $\underline{\hspace{2cm}}$

4. $5 \times 2,916$

estimate: $\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

	2,000	900	10	6
5	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>
	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>

answer: $\underline{\hspace{2cm}}$

5. $3,142 \times 8$

estimate: $\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

answer: $\underline{\hspace{2cm}}$

6. $3 \times 4,546$

estimate: $\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

answer: $\underline{\hspace{2cm}}$



Check



Estimate the product and determine the answer of $4 \times 7,136$. Show your thinking.

estimate: $\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

answer: $\underline{\hspace{2cm}}$

Representing Multiplication of 2 Two-Digit Numbers

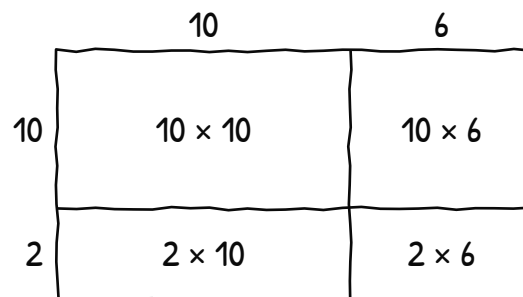
ML 6.06



Modeled Review

Name: Dylan

Jada has a garden that is 12 feet by 16 feet. Draw and label an area diagram of Jada's garden.

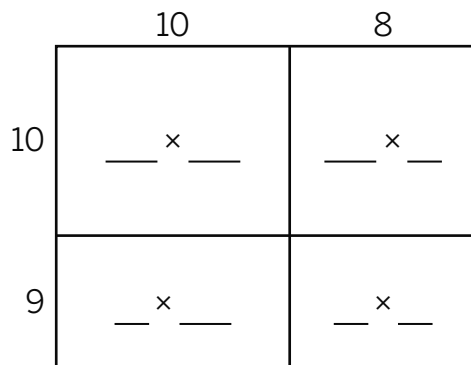


Guided Practice

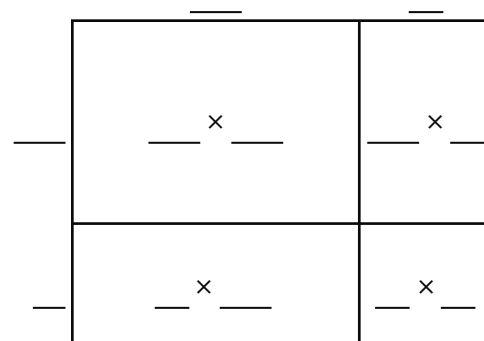


Complete the labeling of each area diagram.

1. Diego has a rectangular patio that is 18 feet by 19 feet.



2. Kai has a rectangular sandbox that is 13 feet by 27 feet.

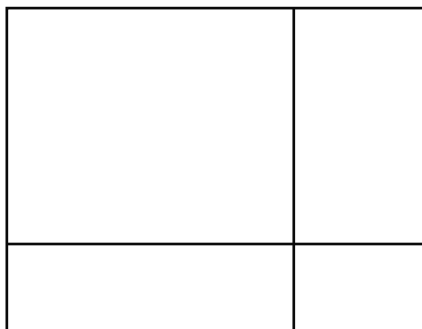




Guided Practice



3. Tristan has a vegetable patch that is 12 feet by 15 feet. Label an area diagram of Tristan's vegetable patch.



4. Avery has a rectangular play area that is 24 feet by 19 feet. Draw and label an area diagram of Avery's play area.



Check



Clare has a flower garden that is 15 feet by 23 feet. Draw and label an area diagram of Clare's flower garden.

Connecting Division Strategies

ML 6.13



Modeled Review

Name: Maya

Calculate the quotient.

$$324 \div 6 = \underline{54}$$

$$324 = 300 + 24$$

$$6 \times 50 = 300$$

$$6 \times 4 = 24$$

$$50 + 4 = 54$$

$$324 \div 6 = 54$$

Name: Eva

Calculate the quotient.

$$324 \div 6 = \underline{54}$$

$$324 = 300 + 24$$

$$300 \div 6 = 50$$

$$24 \div 6 = 4$$

$$50 + 4 = 54$$

$$324 \div 6 = 54$$



Guided Practice



Calculate the quotient by multiplying up *and* using partial quotients. Show your thinking.

1. $642 \div 6 = \underline{\hspace{2cm}}$

$$642 = 600 + 42$$

$$6 \times 100 = 600$$

$$6 \times 7 = 42$$

$$100 + 7 = 107$$

$$642 \div 6 = 107$$

$$\underline{\hspace{1cm}} = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

2. $927 \div 3 = \underline{\hspace{2cm}}$

$$927 = 900 + 27$$

$$3 \times 300 = 900$$

$$3 \times 9 = 27$$

$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$



Guided Practice



Calculate the quotient by multiplying up *and* using partial quotients to divide. Show your thinking.

3. $756 \div 7 =$ _____

$$756 = 700 + 56$$

$$756 = 700 + 56$$

$$7 \times 100 = 700$$

$$700 \div 7 = 100$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

4. $432 \div 8 =$ _____

5. $288 \div 4 =$ _____



Check



Calculate the quotient by multiplying up *and* using partial quotients to divide. Show your thinking.

$864 \div 8 =$ _____

Dividing Multi-Digit Numbers Using Partial Quotients

ML 6.14



Modeled Review

Name: Diego

Calculate the quotient.

$$672 \div 3 = \underline{\quad 224 \quad}$$

$$\begin{array}{r} 3 \overline{) 672} \\ - 600 \\ \hline 72 \\ - 60 \\ \hline 12 \\ - 12 \\ \hline 0 \end{array}$$

$$3 \times 200$$

$$200$$

$$20$$

$$3 \times 20$$

$$+ 4$$

$$224$$

$$3 \times 4$$



Guided Practice



Calculate the quotient.

1. $245 \div 5 = \underline{\quad \quad \quad}$

2. $1,233 \div 3 = \underline{\quad \quad \quad}$

$$\begin{array}{r} 5 \overline{) 245} \\ - 200 \\ \hline 45 \\ - 45 \\ \hline 0 \end{array}$$

$$5 \times 40$$

$$40$$

$$45$$

$$5 \times 9$$

$$+ 9$$

$$\boxed{}$$

$$\begin{array}{r} 3 \overline{) 1,233} \\ - 1,200 \\ \hline 33 \\ - \boxed{} \\ \hline \boxed{} \end{array}$$

$$3 \times 400$$

$$400$$

$$3 \times \boxed{}$$

$$+ \boxed{}$$

$$\boxed{}$$



Guided Practice



Calculate the quotient.

3. $920 \div 2 =$ _____

$$\begin{array}{r} 2 \overline{) 920} \end{array}$$

4. $2,416 \div 4 =$ _____

$$\begin{array}{r} 4 \overline{) 2,416} \end{array}$$

5. $292 \div 4 =$ _____

6. $1,120 \div 5 =$ _____



Check



Calculate the quotient.

$856 \div 4 =$ _____

Solving Two-Step Problems

ML 6.20



Modeled Review

Name: Avery

A librarian puts 1,260 books equally on 9 shelves. She then receives another 45 books to put on each shelf. How many books will be on each shelf now?

$$\begin{array}{r}
 9 \overline{) 1,260} \\
 \underline{- 900} \\
 360 \\
 \underline{- 360} \\
 0
 \end{array}
 \quad
 \begin{array}{l}
 9 \times 100 \\
 9 \times 40
 \end{array}
 \quad
 \begin{array}{r}
 100 \\
 + 40 \\
 \hline
 140
 \end{array}
 \quad
 140 + 45 = 185$$

answer: 185 books

Guided Practice



Solve the story problem. Show your thinking.

- Workers loaded 864 boxes equally into 8 trucks. Then, 6 boxes were removed from each truck. How many boxes were left on each truck?

Information I know	I am trying to figure out...	The information I need to solve for first is...
864 boxes 8 trucks 6 boxes removed	Total number of boxes left on each truck	Total number of boxes on each truck before removal
Workspace		Answer



Guided Practice



Solve each story problem. Show your thinking.

2. A farmer has 8 apple trees. Each tree produces 295 apples. She keeps 150 apples and sells the rest. How many apples will she sell?

Information I know	I am trying to figure out...	The information I need to solve for first is...
8 apple trees 295 apples on each tree 150 apples for family		
Workspace		Answer

3. A school orders 412 rulers for students. Each ruler costs \$3. The school pays an additional \$28 for shipping. What is the total amount the school spends?

answer: _____



Check



Solve the story problem. Show your thinking.

- A bookstore received 186 new books each day for 8 days. After a big sale, 1,200 of those books were sold. How many books are left?

answer: _____

Solving Problems Involving Area and Perimeter

ML 6.21



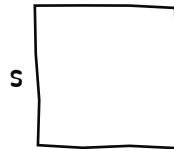
Modeled Review

Name: Tristan

A square has a perimeter of 252 inches. What is the length of each side?

$$\begin{array}{l} 252 \div 4 = s \\ \swarrow \searrow \\ 240 + 12 \end{array}$$

$$\begin{array}{l} 240 \div 4 = \textcircled{60} \\ 12 \div 4 = \textcircled{3} \\ 60 + 3 = 63 \end{array}$$



answer: 63 inches



Guided Practice



1. A rectangle has an area of 446 square inches. The length is 2 inches. What is the width?

answer: _____

2. A square has a perimeter of 136 inches. What is the length of each side?

answer: _____



Guided Practice



3. A rectangle measures 3 feet wide and 257 feet long. What is the area of the rectangle?

answer: _____

4. A rectangle measures 32 feet wide and 26 feet long. What is the area of the rectangle?

answer: _____



Check



A rectangle measures 17 inches wide and 48 inches long. What is the area of the rectangle?

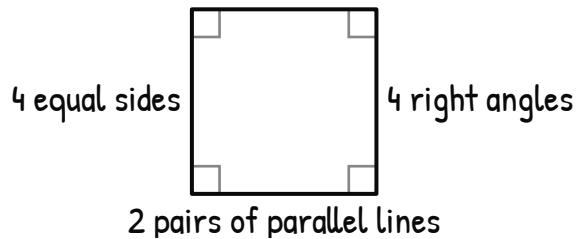
answer: _____

Classifying Quadrilaterals

ML 7.15



Modeled Review

Name: JackCircle *all* the ways you could classify the shape.

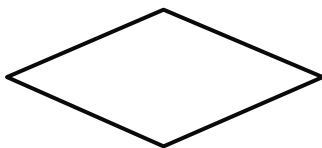
- ☒ A. parallelogram
- ☒ B. quadrilateral
- ☐ C. triangle
- ☒ D. rhombus
- ☒ E. rectangle
- ☒ F. square



Guided Practice

Circle *all* the ways you could classify each shape.

1.



- ☐ A. square
- ☐ B. rectangle
- ☐ C. quadrilateral
- ☐ D. parallelogram
- ☐ E. rhombus
- ☐ F. triangle

2.



- ☐ A. parallelogram
- ☐ B. quadrilateral
- ☐ C. triangle
- ☐ D. rhombus
- ☐ E. rectangle
- ☐ F. square



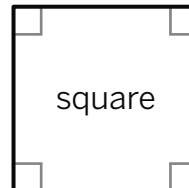
Guided Practice



Identify and select the similarities and differences of the two shapes.

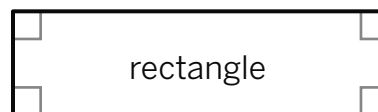
3. What attribute do these shapes have in common?

- A. two pairs of parallel sides
- B. two acute and two obtuse angles
- C. four right angles



4. What makes the *square* different?

- A. all equal sides
- B. two acute angles
- C. one pair of parallel lines



5. What makes the *rectangle* different?

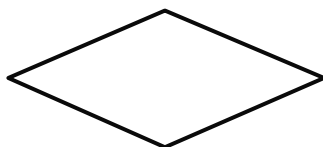
- A. two obtuse angles
- B. no parallel lines
- C. two pairs of equal sides



Check



Circle *all* the ways you could classify the shape.



- A. square
- B. rhombus
- C. triangle
- D. quadrilateral
- E. rectangle
- F. parallelogram



Extensions

Unit Cubes and Volume

Name

Date

**You Choose!**

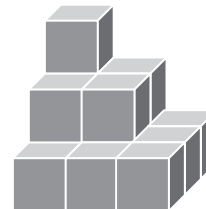
Pick any problem to start with.

1

How many unit cubes are needed
to build the figure?



How many unit cubes are needed
to build the figure?



How many unit cubes are needed
to build the figure?



Name

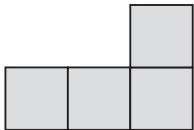
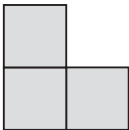
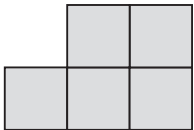
Date

2

Clare made a figure using unit cubes. Shawn took photos of the figure from the front, top, and side views.

You'll need . . .

unit cubes

Front view	Top view	Side view
		

What is the least number of cubes needed to make this figure?

Calculating Volume of Rectangular
Prisms

Name

Date

**You Choose!**

Pick any problem to start with.

1

Diego is packing for a trip. His toiletry bag has edge lengths of 1 foot by 3 inches by 4 inches. One box of travel toothpaste has a volume of 36 cubic inches.

**Show or explain your thinking.**

What is the least number of travel toothpaste boxes that could fit in the toiletry bag?

answer: _____**Show or explain your thinking.**

What is the greatest number of travel toothpaste boxes that could fit in the toiletry bag?

answer: _____

Calculating Volume of Rectangular Prisms
(continued)

Name Date

**You Choose!**

Pick any problem to start with.

2

Will the entire population of the Earth fit into a cube with an edge length of 3 kilometers?



Show or explain your thinking.

answer: _____

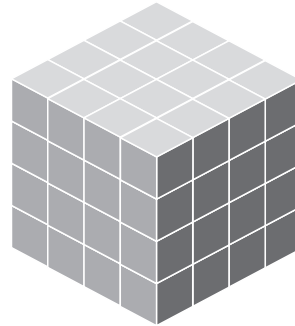
Volume of Solid Figures

Name

Date

1

A $4 \times 4 \times 4$ figure made from unit cubes is painted on all its outer faces.



How many unit cubes have exactly 3 faces painted?

How many unit cubes have exactly 2 faces painted?

How many unit cubes have only 1 face painted?

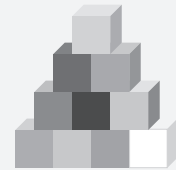
How many unit cubes do not have any paint on them?

Name

Date

2

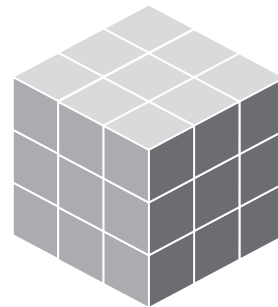
Consider the figure as 8 unit cubes or as one $2 \times 2 \times 2$ cube. Then there are 9 different-sized cubes.

**You'll need . . .**

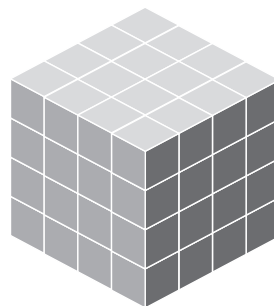
unit cubes

**Show or explain your thinking.**

Consider the $3 \times 3 \times 3$ cube.
How many different-sized
cubes are in the figure?



Consider the $4 \times 4 \times 4$ cube.
How many different-sized
cubes are in the figure?



Fractions as Quotients

Name

Date

**You Choose!**

Pick any problem to start with.

1

Priya was riding the school bus to school. Halfway through the drive, she fell asleep. She woke up when half the distance that she had slept was left for the ride to school. What portion of the drive did Priya sleep through?

**Show or explain your thinking.**

answer: _____

2

Think about the last time you needed to share something with a friend. It is easy to share equally when it is a regular shape. But what if it is not a regular shape?

What is 1 strategy to share something that is not a regular shape?

Name

Date

3

3 siblings, Ava, Ben, and Grace, want to equally divide their irregularly shaped land, but the land cannot be accurately measured. How can they divide the land so that each of them receives a fair $\frac{1}{3}$ portion of the land?

**Show or explain your thinking.**

Fractions of Whole Numbers

Name

Date

**You Choose!**

Pick any problem to start with.

1

Divide 5 apples equally among 6 people without cutting each apple into more than 3 parts.

**Show or explain your thinking.**

Name

Date

2

Place the numbers 1, 2, 3, 4, 5, 6, 7, 8, or 9 once to make a true equation.

$$\frac{\boxed{}}{\boxed{}} \times \boxed{} = \frac{\boxed{}}{\boxed{}}$$

Can you think of another way?

$$\frac{\boxed{}}{\boxed{}} \times \boxed{} = \frac{\boxed{}}{\boxed{}}$$

Area and Fractional Side Lengths

Name

Date

**You Choose!**

Pick any problem to start with.

1

The large rectangle is made up of 3 smaller identical rectangles.

One side of the smaller rectangle measures $\frac{1}{3}$ inches.

What is the area of the large rectangle?

 $\frac{1}{3}$ in.**Show or explain your thinking.**

answer: _____

Name Date

**You Choose!**

Pick any problem to start with.

2

A regular sheet of paper is $\frac{81}{2}$ inches wide and 11 inches long.

How many times would you need to fold the sheet of paper in half before the area of the top of the folded paper is less than 1 square inch?

**Show or explain your thinking.****answer:** _____

Fraction Multiplication

Name

Date

1

The number of absent students in a class was $\frac{1}{5}$ of the number of present students. When 3 students left the class, the number of absent students became $\frac{1}{4}$ of the number of present students. How many students are in the class?



Show or explain your thinking.

answer: _____

2

A tank is full of water. An equal amount of water is poured into each of 3 cans. In the first can, the water fills $\frac{1}{2}$ of its volume. In the second can, the water fills $\frac{2}{3}$ of its volume. In the third can, the water fills $\frac{3}{4}$ of its volume. The tank and all 3 cans each hold a whole number of liters.

What is the smallest tank volume possible?



Show or explain your thinking.

answer: _____

Name

Date

3

Place the digits 1, 2, 3, and 4 exactly once to make the equation true.

$$\begin{array}{r} \square \\ \hline \square \end{array} \times \begin{array}{r} \square \\ \hline 9 \end{array} = \begin{array}{r} \square \\ \hline 6 \end{array}$$

Name

Date

1

Mom bought new pencils for her triplet daughters — Leila, Liina, and Lily. Leila was the first to see the pencils. She took a third of the pencils and went out to play. Then Liina took a third of the remaining pencils and went out to play. Then Lily took 4 pencils — a third of what was left. How many pencils did Mom buy?

**Show or explain your thinking.****answer:** _____**2**

Some friends painted 2 fences — 1 large fence and 1 smaller fence that was half the size of the large fence. They spent half a day painting the large fence together. For the rest of the day, half of the friends painted the large fence, while the other half painted the smaller fence. At the end of the day, the big fence was done. 1 friend finished painting the small fence the next day. How many friends painted the fences?

**Show or explain your thinking.****answer:** _____

Multi-digit Multiplication Using the
Standard Algorithm

Name

Date

**You Choose!**

Pick any problem to start with.

1

Fill in the missing digits to make each calculation true.

$$\begin{array}{r}
 75 \\
 \times \square\square \\
 \hline
 \square5 \\
 + 1\square\square \\
 \hline
 \square\square\square\square
 \end{array}$$

$$\begin{array}{r}
 75 \\
 \times \square\square \\
 \hline
 \square\square5 \\
 + \square\square\square \\
 \hline
 \square2\square\square
 \end{array}$$

2

Study the Japanese method of multiplication.

$$23 \times 12 = 276$$

$$213 \times 13 = 2,769$$

Use this method to multiply the numbers.

$$42 \times 37$$

$$273 \times 54$$

In the puzzle, each letter represents the same number.

What number is B?

$$\begin{array}{r}
 \begin{array}{cc}
 \boxed{A} & \boxed{B} \\
 \boxed{A} & \boxed{B}
 \end{array} \\
 \times \\
 \hline
 \begin{array}{ccc}
 & \boxed{C} & \boxed{A} & \boxed{B} \\
 + & \boxed{B} & \boxed{D} & \boxed{B}
 \end{array} \\
 \hline
 \begin{array}{cccc}
 \boxed{B} & \boxed{E} & \boxed{D} & \boxed{B}
 \end{array}
 \end{array}$$

 Show or explain your thinking.

B: _____

Multi-digit Division Using Partial
Quotients

Name _____ Date _____

**You Choose!**

Pick any problem to start with.

1

How many Sundays could there be in 1 month?
Determine *all* the possibilities.

**Show or explain your thinking.**

answer: _____

What is the greatest number of Sundays possible in 1 year?

**Show or explain your thinking.**

answer: _____

In a year, there are more Sundays than Saturdays and more Mondays than Tuesdays. What day of the week is January 2nd?

**Show or explain your thinking.**

answer: _____

2

		4	
1	2)	
			0
-			
		6	
-			
			0

Applying Multiplication and
Division Concepts

Name Date

**You Choose!**

Pick any problem to start with.

1

Place 1 set of parentheses to make the equation true.

$$6 \times 8 + 20 \div 4 - 2 = 58$$

What other true equations could you get if you place the parentheses differently? Determine as many true equations as possible.

**Show or explain your thinking.****2**

Place arithmetic operations (+, −, ×, ÷) and, if necessary, parentheses between the numbers to make the equation true.

$$1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad = \quad 9$$

Applying Multiplication and Division
Concepts (continued)

Name

Date

3

An elementary school has students from Kindergarten to Grade 5. Each grade has the same number of classes, and each class has the same number of students. There are a total of 966 students at the school.

How many classes are there in each grade? How many students are in each class?

**Show or explain your thinking.****classes:** _____**students in
each class:** _____

Numbers to Thousandths

Name

Date

**You Choose!**

Pick any problem to start with.

1

Each letter represents the same number. Determine the values for A and B so all the comparison statements are true.

$$15.0\mathbf{A} < 15.02$$

$$5.14 \geq 5.\mathbf{A}9$$

$$9.8\mathbf{B} \geq 9.87$$

$$102.1\mathbf{B}8 < 102.193$$

2

In each comparison statement, some digits are missing. Place $<$, $>$, or $=$ between the numbers you can compare without knowing the missing digits.

For the numbers that you can't compare, provide two ways to fill in the empty spaces: one where the first number is greater and another where the first number is less than the second number.

$$\boxed{8}.\boxed{2}\boxed{}\boxed{} ___ \boxed{8}.\boxed{0}\boxed{}\boxed{}$$

$$\boxed{8}.\boxed{}\boxed{}\boxed{} ___ \boxed{8}.\boxed{}\boxed{}\boxed{}$$

$$\boxed{}\boxed{9}.\boxed{}\boxed{}\boxed{5} ___ \boxed{}\boxed{8}.\boxed{5}\boxed{}\boxed{}$$

$$2\boxed{}\boxed{}.\boxed{0}\boxed{} ___ 1\boxed{}\boxed{}.\boxed{9}\boxed{}\boxed{}$$

$$0.\boxed{}\boxed{}\boxed{} ___ \boxed{}.\boxed{0}7\boxed{}$$

$$3\boxed{5}1.\boxed{7}1\boxed{} ___ 3\boxed{5}1.\boxed{7}1\boxed{}\boxed{}$$

Numbers to Thousandths (continued)

Name

Date

3

Complete the grid with the numbers so that each number appears exactly once in each row and each column and all the comparison statements are true.

21.3	20.857	20.85	20.9
------	--------	-------	------

20.857			
v			
		>	
^			
	<		

12.1	2.1	2.01	2.09
------	-----	------	------

	>		>		
v			v		
	v	v	^		

Add and Subtract Decimals

Name

Date

**You Choose!**

Pick any problem to start with.

1

Each equation is missing zeros and/or decimal points. Place the missing zeros and/or decimal points to make each equation true.

$$102 + 93 = 103.2$$

$$162 - 79 = 15.41$$

$$234 + 158 = 18.14$$

$$320 + 3.8 = 358$$

$$547 - 35 = 1.97$$

$$483 - 4.25 = 4405$$

2

Find the sum.

$$0.01 + 0.02 + 0.03 + \dots + 0.99$$



Show or explain your thinking.

Name

Date

3

How will the sum of 2 numbers change if you round one or both of the addends?



Show or explain your thinking.

How will the difference between 2 numbers change if you only round the minuend, only the subtrahend, or both the subtrahend and the minuend?



Show or explain your thinking.

Multiply Decimals

Name

Date

**You Choose!**

Pick any problem to start with.

1

Each equation is missing zeros and/or decimal points. Place the missing zeros and/or decimal points to make each equation true.

$$96 \times 25 = 24$$

$$548 \times 2.1 = 11.508$$

$$46 \times 318 = 0.14628$$

2

Determine the product of each expression.

$$0.1 \times 0.01 \times 0.001$$

$$0.1 \times 0.01 \times 0.001 \times 0.0001 \times 0.00001$$

$$0.1 \times 0.01 \times 0.001 \times \dots \times 0.00 \dots 01 \text{ (99 digits after the decimal point)}$$

Name

Date

3

Fill in the missing digits to make the calculation true.

$$\begin{array}{r} \square \square \\ \times \square \square \\ \hline \square \square \square \\ + \square \square \\ \hline \square \square \square \square \end{array}$$

Divide Decimals

Name

Date

**You Choose!**

Pick any problem to start with.

1

How will the quotient change if you round:

- only the dividend?
- only the divisor?
- both the dividend and the divisor?

**Show or explain your thinking.**

Name

Date

2

Each equation is missing zeros and/or decimal points. Place the missing zeros and/or decimal points to make each equation true.

$$49.44 \div 6 = 824$$

$$204.8 \div 8 = 256$$

$$44.1 \div 98 = 45$$

3

In the puzzle, each letter represents the same number.

What number is A?

What number is B?

What number is R?

$$RR.R \div A = A.B$$

Name

Date

**You Choose!**

Pick any problem to start with.

1

Write each number using exponential form.

The approximate population of Africa in 2009.

1,000,000,000

The estimated number of stars in Milky Way.

100,000,000,000

The amount of dollars added to United States debt each year.

1,000,000,000,000

The denomination of a bill in Zimbabwe.

100,000,000,000,000

The estimated number of stars in universe.

1,000,000,000,000,000,000,000,000

Why is exponential form helpful for writing these numbers?

Name

Date

2

Change the position of 1 card to make the equation true.

1	0	1	-	1	=	1	0	2
---	---	---	---	---	---	---	---	---

Measurement Conversions

Name

Date

**You Choose!**

Pick any problem to start with.

1

The table shows the weight for U.S. coins in grams.

What is the maximum and minimum sum you can get if you have exactly 1 kilogram of coins?

Coin	Approximate weight (grams)
penny	2.5
nickel	5
dime	2.3
quarter	5.7



Show or explain your thinking.

Name

Date

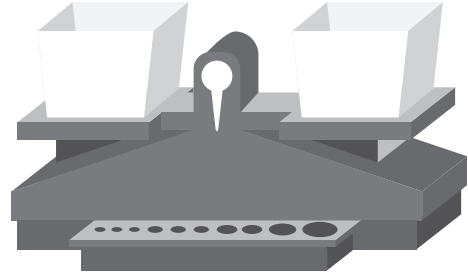
2

Here is a balance scale.

Which set of weights is sufficient to weigh any whole weight:

- from 1 to 5 kilograms
- from 1 to 15 kilograms
- from 1 to 40 kilograms

if the weights can only be placed on one scale pan?



Show or explain your thinking.

Which set of weights is sufficient to weigh any whole weight

- from 1 to 3 kilograms
- from 1 to 10 kilograms
- from 1 to 30 kilograms

if the weights can be placed on both scale pans?



Show or explain your thinking.

Add and Subtract Fractions with
Unlike Denominators

Name Date

**You Choose!**

Pick any problem to start with.

1

Place the digits 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9 exactly once to make the equation true.

$$\frac{\square}{\square} + \frac{\square}{\square} = \frac{\square}{\square}$$

Is it possible to place the digits 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9 exactly once to make the equation true?

$$\frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square} = \square$$



Show or explain your thinking.

Add and Subtract Fractions with Unlike
Denominators (continued)

Name

Date

2

In the puzzle, the letter represents the same number.
Determine the value for A so that the equation is true.

$$\frac{\boxed{20}}{\boxed{A}} - \frac{\boxed{A}}{\boxed{15}} = \frac{\boxed{20}}{\boxed{15}}$$

3

To eat a bag of tangerines takes Han 6 hours, his mom 3 hours, and his grandpa 2 hours. If they all start eating at the same time, how long will it take them to finish the bag of tangerines?



Show or explain your thinking.

answer: _____

Hierarchies of Shapes

Name

Date

**You Choose!**

Pick any problem to start with.

1

Jada cut a quadrilateral in half, from one vertex to the opposite vertex, which resulted in 2 isosceles triangles. What kind of quadrilateral could Jada have cut in half?

**Draw****2**

Clare put together 2 right triangles to make a quadrilateral. What kind of quadrilateral could Clare have made?

**Draw**

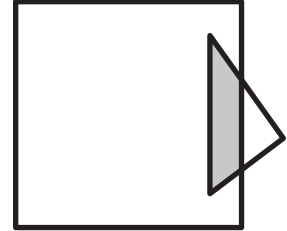
Name

Date

3

Here is an intersection of a square and a triangle, where the intersection is a trapezoid.

Draw 2 triangles that intersect with each condition.



Draw

the intersection is a point

the intersection is a segment

the intersection is a triangle

the intersection is a quadrilateral

the intersection is a pentagon

the intersection is a hexagon

The Coordinate Plane

Name

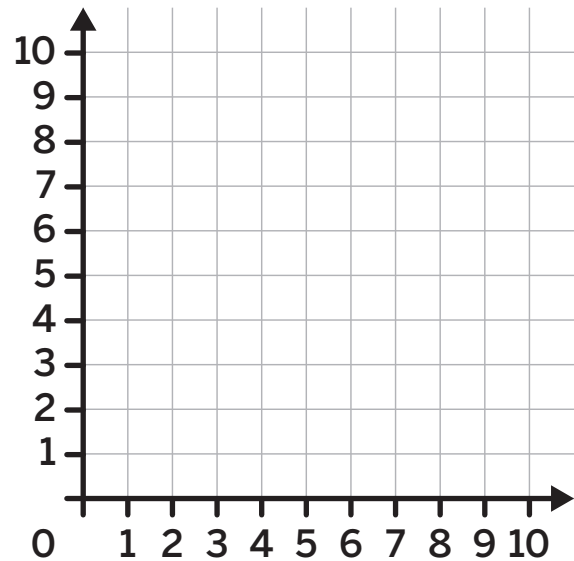
Date

**You Choose!**

Pick any problem to start with.

1

Describe, using coordinates, how to trace a letter from your name.

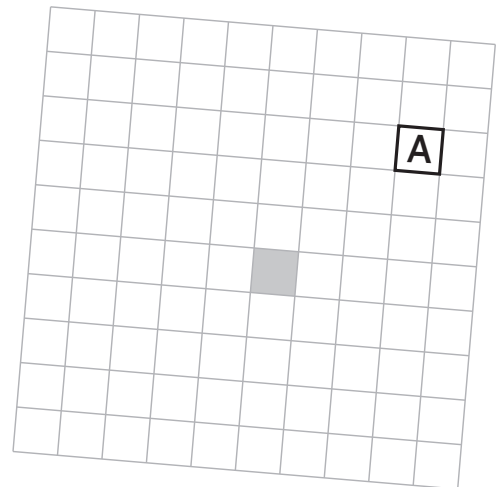
**2**

The image shows a portion of a seating chart in a movie theater. Clare sits in the second row, seat 5, labeled A.

What is the row and seat of the shaded seat?

row: _____

seat: _____



Numerical Patterns

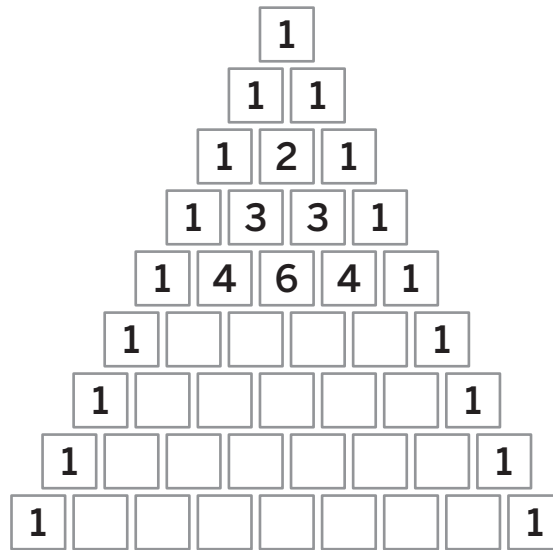
Name Date

**You Choose!**

Pick any problem to start with.

1

Here is Pascal's Triangle. Every number is the sum of the numbers above it. For example, $4 = 3 + 1$.



Complete the remaining rows of Pascal's Triangle.

Look at the second diagonal. What numbers do you see?
Do you think the pattern continues? Why?

What patterns do you see in the third diagonal?

Determine the sum of the numbers in each row. What pattern do you see?

What other patterns can you identify in Pascal's Triangle?

Name

Date

2

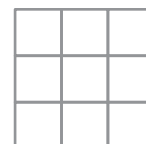
Here is a square.



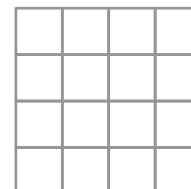
How many squares are in 2 by 2 squares?



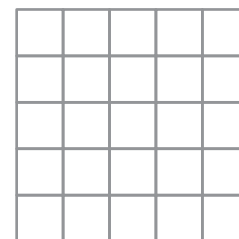
How many squares of different sizes are in 3 by 3 squares?



How many squares of different sizes are in 4 by 4 squares?



How many squares of different sizes are in 5 by 5 squares?



Record your results in the table. What pattern do you see?

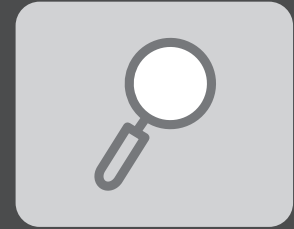
Size of inside squares	1 by 1 square	2 by 2 square	3 by 3 square	4 by 4 square	5 by 5 square
1 by 1	1				
2 by 2	0				
3 by 3	0				
4 by 4	0				



Investigations

Investigation 1

Farm to Table



CC2 Modeling

CC3 Seeing Division

5.NBT.7, 5.NBT.4, 5.OA.2, SMP.1, SMP.2, SMP.4

Task

1

Name _____ Date _____

Exploring California Produce

Let's discuss how produce is grown in California.



1

Discuss 

What are some types of produce grown in California?



Task

1

Name _____ Date _____

Exploring California Produce (continued)

2

This table shows the cost of growing different produce in California. Work with a partner to determine the cost per pound of each type of produce to the nearest penny.

Produce	Cost to grow	Cost per pound
tomatoes	\$114 for 2,000 lb	
strawberries	\$13 for 8 lb	
romaine lettuce	\$20 for 22 lb	
broccoli	\$22 for 20 lb	
avocado	\$1.00 per lb	
grapes	\$1,202 for 2,000 lb	
oranges	\$16.48 for 38 lb	
almonds	\$4 per lb	
pistachios	\$214 for 100 lb	
red onion	\$6.66 for 40 lb	



Task

1

Name _____ Date _____

Exploring California Produce (continued)

3

Discuss 

What are some costs that are involved in growing produce?

4

Discuss 

Why do you think some produce is more expensive to grow than others?

5

Discuss 

Make a prediction. How much do you think each type of produce sells for?



Task

2

Name _____ Date _____

Produce Sales

- 1** This table shows the selling price of produce in Los Angeles in January, 2025. Work with a partner to determine the selling price per pound of each type of produce to the nearest penny.

Produce	Selling price	Price per pound
tomatoes	\$15 for 25 lb	
strawberries	\$25 for 8 lb	
romaine lettuce	\$20 for 22 lb	
broccoli	\$22 for \$20 lb	
avocado	\$96 for 26 lb	
grapes	\$41 for 18 lb	
oranges	\$47 for 42 lb	
almonds	\$175 for 26 lb	
pistachios	\$140 for 25 lb	
red onions	\$16 for 25 lb	



Task

2

Name _____ Date _____

Produce Sales (continued)

- 2 Which type of produce has the *greatest* difference between the cost to grow and the selling price per pound?



Show your thinking.

Answer: _____

- 3 If you were a farmer, which produce would you choose to sell? Why? Use mathematics to support your answer.



Task

3

Name _____ Date _____

Designer Greens

You have decided to open a farm-to-table salad restaurant in Los Angeles. After speaking with local farms, they have agreed to allow you to purchase produce for 2 times the growing price.

Complete Problems 1–4 on the Salad Planning handout for each salad.

- 1 Create 2 salad recipes for your restaurant using the produce from Tasks 1 and 2. Each salad should include between 3 and 6 ingredients, not including salad dressing.
- 2 On average, a salad weighs 0.75 pounds. Determine how much of each ingredient you will need for your salad.
- 3 Determine the price you will pay to the farm for each ingredient.
- 4 Determine the total cost of ingredients to make each of your salads.

Typically, restaurants charge customers 3 times the cost of ingredients for a dish.

- 5 Determine the price you will charge for each of your salads.



Show your thinking.

Salad 1: _____

Salad 2: _____

Name _____ Date _____

Salad Recipes

Ingredient	Cost per pound (growing cost × 2)	Weight (lb)	Total cost
salad dressing			\$0.43
	Total weight	0.75	
		Total cost	

Name _____ Date _____

Salad Recipes (continued)

Ingredient	Cost per pound (growing cost × 2)	Weight (lb)	Total cost
salad dressing			\$0.43
	Total weight	0.75	
		Total cost	



Task

4

Name _____ Date _____

Selling Salads

Create an advertisement for your restaurant. It must include the following:

- A creative name for your restaurant
- At least one of the salads you created
 - name and picture
 - the local produce you chose to use in the salad
 - the cost
- A reason why people should eat at your restaurant

Use the space below to plan your advertisement.

Investigation 2

Beach Clean-Up Day



CC2 Modeling

5.G.2, 5.NBT.7, 5.NBT.3, 5.NBT.3.a, 5.NBT.3.b, 5.NBT.4, SMP.1, SMP.4

Task 1

Name _____ Date _____

What Is a Beach Clean-Up?

Let's discuss the importance of keeping the beaches clean.

1 Discuss

Imagine you are planning a beach clean-up.

- What are some items you think you would need to organize a beach clean-up event?
- How many people do you think you would need to plan for?
- How much do you think it costs to do a beach clean-up?





Task

1

Name _____ Date _____

What Is a Beach Clean-Up? (continued)

Use the coordinate grid on the *What is a Beach Clean-Up?* PDF to create a map to help the beach clean-up volunteers know where to focus their efforts.

- 2** The following points represent the areas of the beach with the largest amount of trash: (1, 3), (6, 7), (9, 5) (15, 11).

Plot the points with a circle.

- 3** Place up to 3 additional points on the map of the beach for clean-up stations. Plot these points with a square. Then write the coordinates for each clean-up station.

4 Discuss

- How many clean-up stations did you create?
- Why did you choose those locations to place a clean-up station?



Task

2

Name _____ Date _____

Cost of Beach Clean-Up

Complete Problems 1–4 using the *Planning the Beach Clean-Up Day* PDF.

- 1 Complete the table with the items needed, cost of each item, quantities, and total cost for each item. Remember to stay within a budget of \$750.

How many volunteers are you planning for? _____

2 Discuss

- Did you stay within the budget of \$750? If not, by how much did you go over? If so, by how much were you under?
- What made it easy to stay within the budget? What made it challenging?

- 3 Organize your purchases by creating a list of the supplies that will be at each clean up station. Only use the number of stations you chose on the map in Task 1.

4 Discuss

How does the location of your stations affect the amount of supplies each one receives?



Task

3

Name _____ Date _____

Comparing Beach Clean-Up Plans

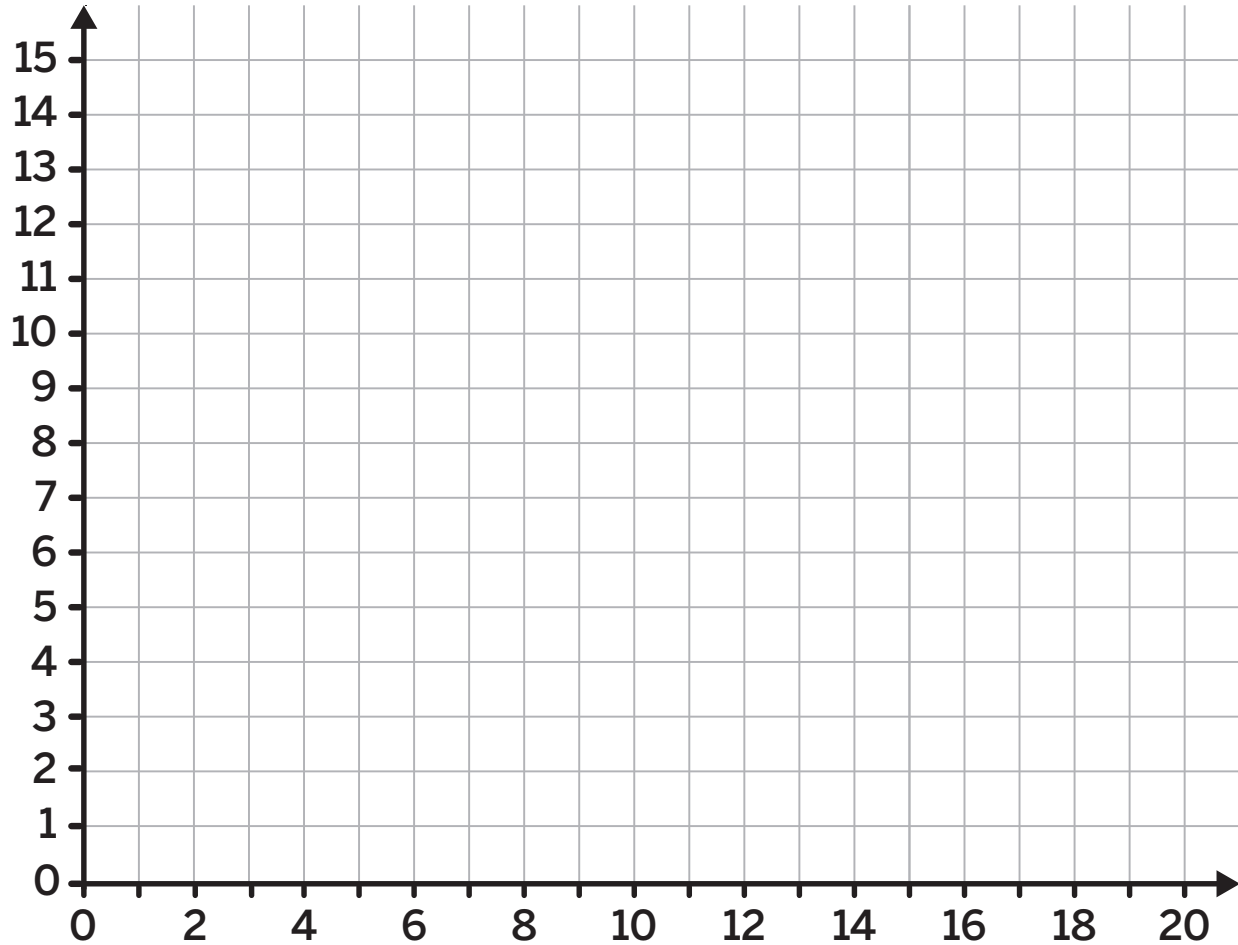
You will share your plans for your beach clean-up during a Gallery Tour. Be ready to explain why you chose the amounts of each item and how you found the coordinate points.

Here are some questions to ask when you are listening to someone else explain their plan. Choose at least 3 questions to ask each person.

- Why is beach cleanliness important?
- What or who benefits from a beach clean-up?
- How did you decide on the number of _____ (supply) for your event?
- How did you determine the total number of _____ (supply) needed?
- How did you decide where to place the points on your map?
- Is this event something that you would like to do in real life? Explain why.

Name _____ Date _____

What is a Beach Clean-Up Day?



Name _____ Date _____

Planning the Beach Clean-Up Day

Complete the tables below.

Item	Cost per item	Quantity needed	Total cost of item
1 box of 110 trash bags	\$17.16		
1 box of 100 disposable gloves	\$8.99		
bucket	\$6.99		
40 bottled waters	\$26.99		
grabbing tool	\$19.99		
first aid kit	\$65.98		
4 small bottles of hand sanitizer	\$16.99		
wheelbarrow	\$325.00		
16 oz. bag of pretzels	\$6.94		
1 orange	\$0.77		
60 granola bars	\$12.49		
		Total cost of event	

Name _____ Date _____

Planning the Beach Clean-Up Day

Complete the tables below.

Station 1	Station 1	Station 1