

**Are you ready to**  
**➔ EARN?**

Mission 5

**Volume, Area, and Shapes**

Name: \_\_\_\_\_

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Fourth Edition

Name: \_\_\_\_\_

### Weekly Goal Tracker

Week of:	My goal is to earn badges for lessons: _____	Teacher Signature:
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Name: \_\_\_\_\_

## Mission 5: Workbook Checklist

<b>1. Getting into 3-D</b>	Date: _____	Teacher Signature: _____
Math Chat:	<input type="radio"/> Notes	<input type="radio"/> Exit Ticket
<b>2. Voyage into Volume</b>	Date: _____	Teacher Signature: _____
Learning Lab:		<input type="radio"/> Exit Ticket
<b>3. Layered Volume</b>	Date: _____	Teacher Signature: _____
Math Chat:	<input type="radio"/> Notes	<input type="radio"/> Exit Ticket
<b>4. Length, Width, Height...Volume!</b>	Date: _____	Teacher Signature: _____
Math Chat:	<input type="radio"/> Notes	<input type="radio"/> Exit Ticket
<b>5. Fishy Volume</b>	Date: _____	Teacher Signature: _____
Learning Lab:		<input type="radio"/> Exit Ticket
<b>6. Stack 'Em</b>	Date: _____	Teacher Signature: _____
Math Chat:	<input type="radio"/> Notes	<input type="radio"/> Exit Ticket
<b>7. Difficult Dimensions</b>	Date: _____	Teacher Signature: _____
Z-Squad:	<input type="radio"/> Notes	<input type="radio"/> Exit Ticket
<b>10. Tackling Tiles</b>	Date: _____	Teacher Signature: _____
Math Chat:	<input type="radio"/> Notes	<input type="radio"/> Exit Ticket
<b>11. Tiny Tiles</b>	Date: _____	Teacher Signature: _____
Math Chat:	<input type="radio"/> Notes	<input type="radio"/> Exit Ticket
<b>12. Fractional Sides</b>	Date: _____	Teacher Signature: _____
Learning Lab:		<input type="radio"/> Exit Ticket



Lesson 1  
G:5 M:5

## Getting into 3-D

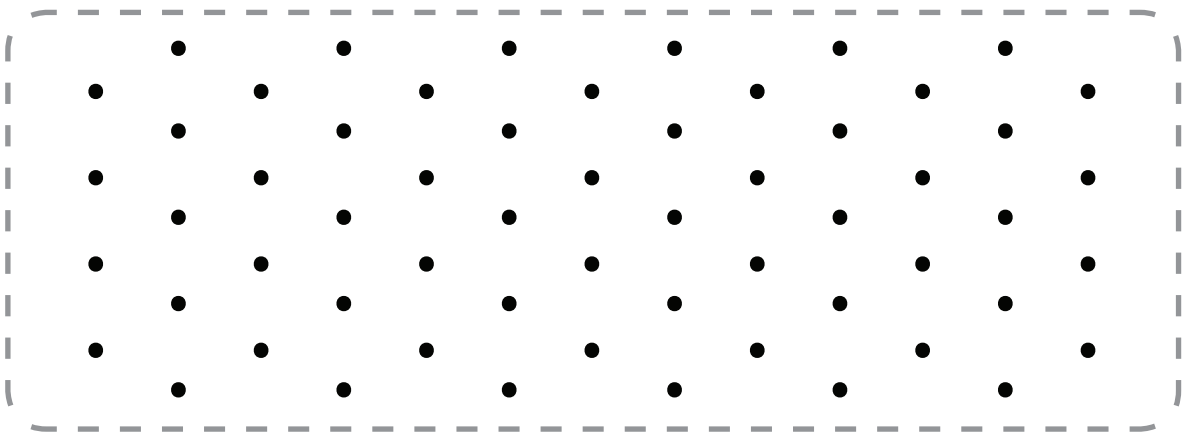
### ZEARN STUDENT NOTES

Name: \_\_\_\_\_ Date: \_\_\_\_\_

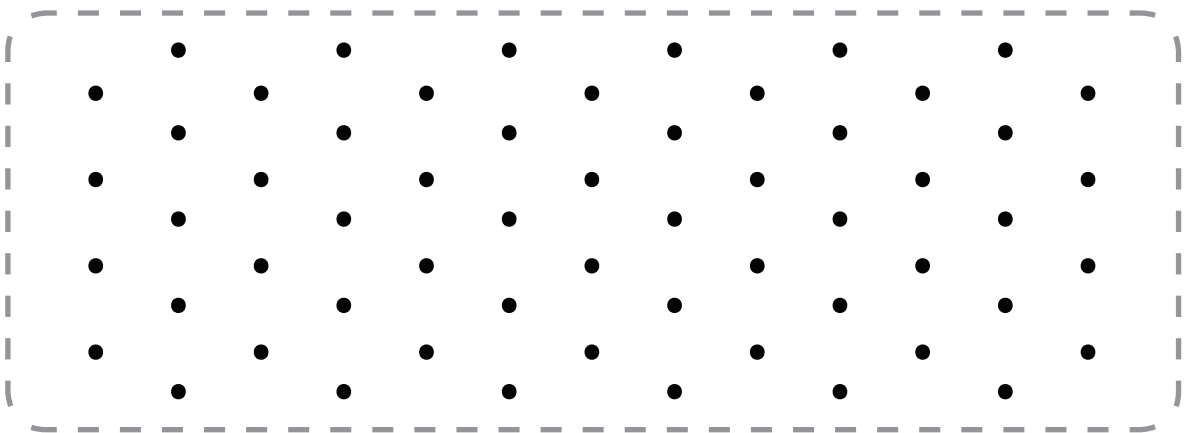
Complete:

Class: \_\_\_\_\_

**1** Draw one cubic unit using the dot paper below.



**2** Draw two cubic units using the dot paper below.



EXTRA WORKSPACE





**Lesson 1**  
G:5 M:5

**EXIT TICKET**

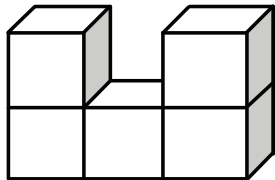
Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

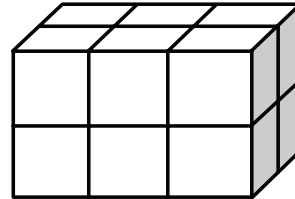
Class: \_\_\_\_\_

1. What is the volume of the figures pictured below?

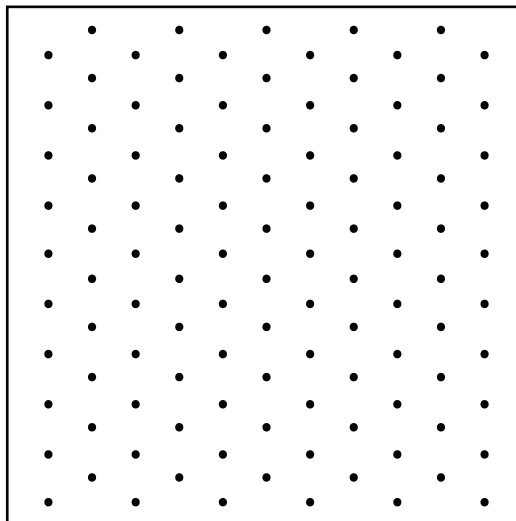
a.



b.



2. Draw a picture of a figure with a volume of 3 cubic units on the dot paper.





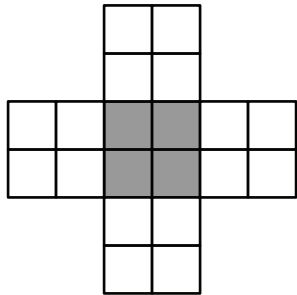
Lesson 2  
G:5 M:5

EXIT TICKET

Name: \_\_\_\_\_ Date: \_\_\_\_\_

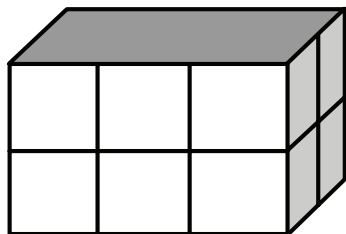
Complete:  Class: \_\_\_\_\_

1. If this figure were to be folded into a box, how many cubes would fill it?



Number of cubes: \_\_\_\_\_

2. Predict how many centimeter cubes will fit in the box, and briefly explain your prediction. Use cubes to find the actual volume. (The figure is not drawn to scale.)



Prediction: \_\_\_\_\_

Actual: \_\_\_\_\_





**Lesson 3**  
G:5 M:5

**Layered Volume**

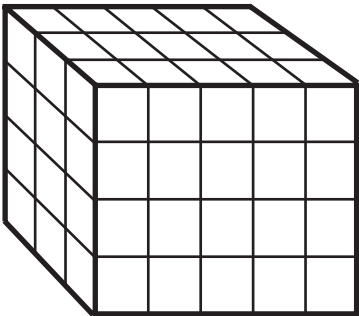
**ZEARN STUDENT NOTES**

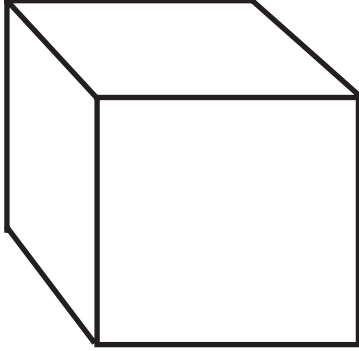
Name: \_\_\_\_\_ Date: \_\_\_\_\_

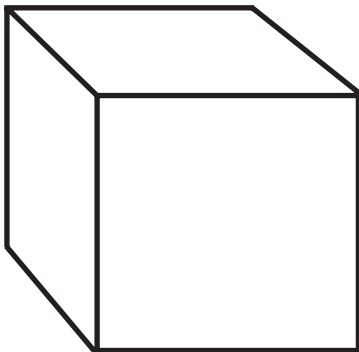
Complete:

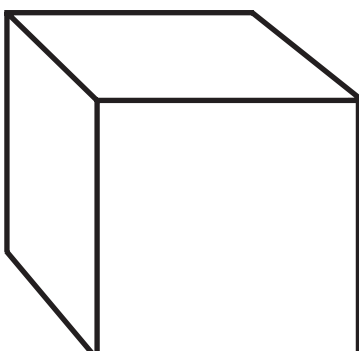
Class: \_\_\_\_\_

Cubes in Each Layer	Number of Layers	Volume
		cm <sup>3</sup>
		cm <sup>3</sup>
		cm <sup>3</sup>









1



EXTRA WORKSPACE



**Lesson 3**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

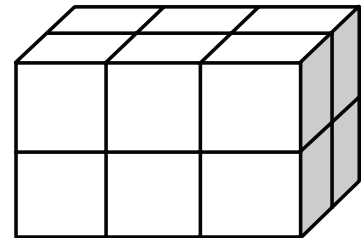
Class: \_\_\_\_\_

1. Use unit cubes to build the figure to the right, and fill in the missing information.

Number of layers: \_\_\_\_\_

Number of cubes in each layer: \_\_\_\_\_

Volume: \_\_\_\_\_ cubic centimeters

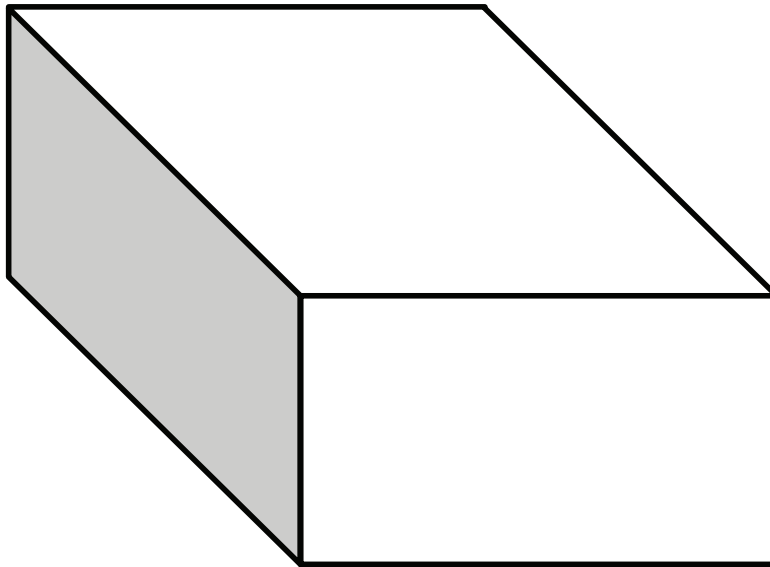


2. This prism measures 3 units by 4 units by 2 units. Draw the layers as indicated.

Number of layers: 4

Number of cubic units in each layer: 6

Volume: \_\_\_\_\_ cubic centimeters





**Lesson 4**  
G:5 M:5

**Length, Width, Height...Volume!**

**ZEARN STUDENT NOTES**

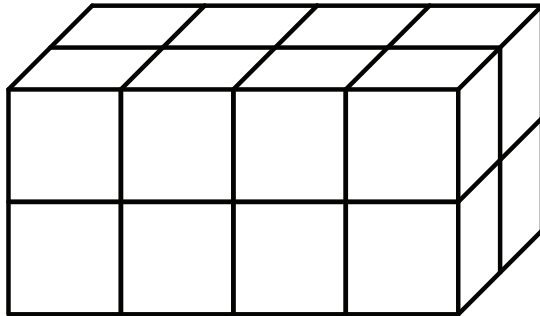
Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1

SHOW YOUR WORK



Length: \_\_\_\_\_ cm

Width: \_\_\_\_\_ cm

Height: \_\_\_\_\_ cm

Volume: \_\_\_\_\_ cm<sup>3</sup>

\_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_



EXTRA WORKSPACE



**Lesson 4**  
G:5 M:5

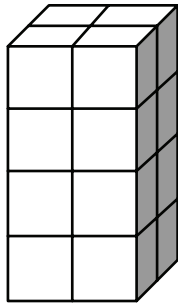
**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. Calculate the volume of the prism.



Length: \_\_\_\_\_ mm

Width: \_\_\_\_\_ mm

Height: \_\_\_\_\_ mm

Volume: \_\_\_\_\_ mm<sup>3</sup>

Write the multiplication sentence that shows how you calculated the volume. Be sure to include the units.

\_\_\_\_\_

2. A rectangular prism has a top face with an area of 20 ft<sup>2</sup> and a height of 5 ft. What is the volume of this rectangular prism?





**Lesson 5**  
G:5 M:5

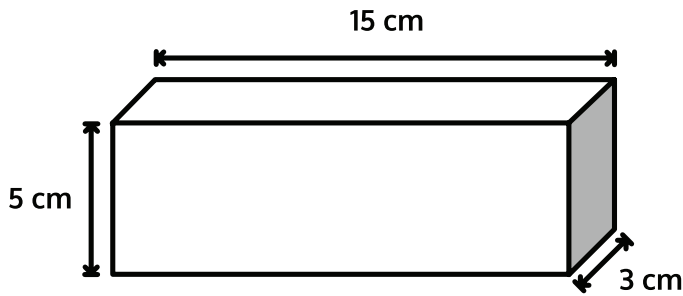
**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

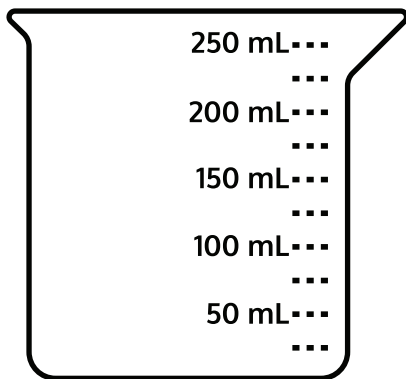
Complete:

Class: \_\_\_\_\_

1. Find the volume of the prism.



2. Shade the beaker to show how much liquid would fill the box.





**Lesson 6**  
G:5 M:5

**Stack 'Em**

**ZEARN STUDENT NOTES**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

**1** What is the total volume of this shape?

Top Prism: \_\_\_\_\_ m × \_\_\_\_\_ m × \_\_\_\_\_ m = \_\_\_\_\_ m<sup>3</sup>

Bottom Prism: \_\_\_\_\_ m × \_\_\_\_\_ m × \_\_\_\_\_ m = \_\_\_\_\_ m<sup>3</sup>

Total Volume: \_\_\_\_\_ m<sup>3</sup> + \_\_\_\_\_ m<sup>3</sup> = \_\_\_\_\_ m<sup>3</sup>



EXTRA WORKSPACE





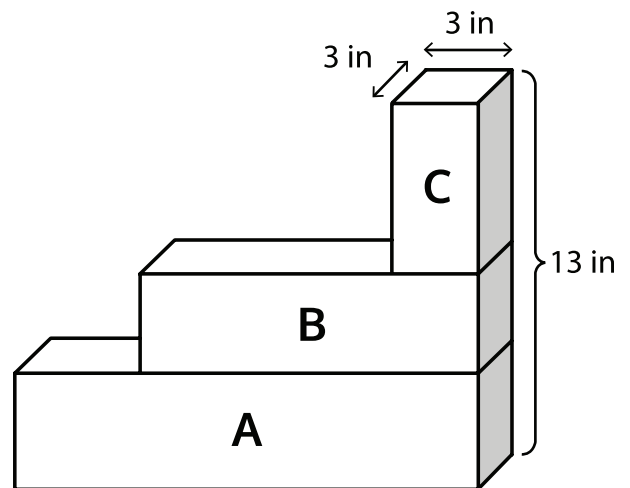
**Lesson 6**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:  Class: \_\_\_\_\_

1. The image below represents three planters that are filled with soil. Find the total volume of soil in the three planters. Planter A is 14 inches by 3 inches by 4 inches. Planter B is 9 inches by 3 inches by 3 inches.





**Lesson 7**  
G:5 M:5

**Difficult Dimensions**

**ZEARN STUDENT NOTES**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

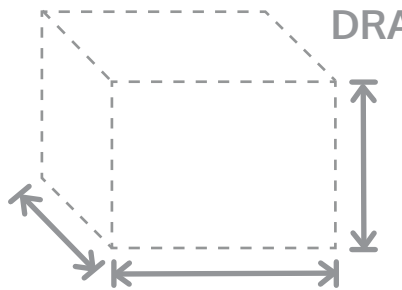
Complete:

Class: \_\_\_\_\_

- 1** Geoffrey wants to make a rectangular planter that extends from the ground to just below his back window. The window starts 3 feet off the ground.

If he wants the planter to hold 36 cubic feet of soil, name one way he could build the planter so that it is 3 feet tall. Explain how you know.

DRAW



SOLVE

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2

Geoffrey needs another planter that holds double the volume. Should he double all of the dimensions? Explain why or why not. Include a drawing in your explanation.

DRAW

SOLVE

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**Lesson 7**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. A storage shed is a rectangular prism and has dimensions of 6 meters by 5 meters by 12 meters. If Jean were to double these dimensions, she believes she would only double the volume.

Is she correct? Explain why or why not. Include a drawing in your explanation.





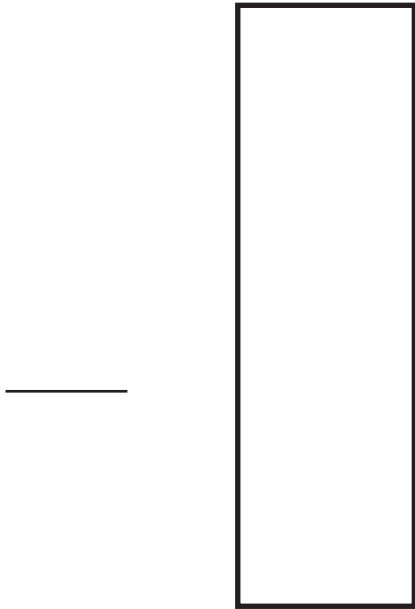
<b>Lesson 10</b> G:5 M:5	<b>Tackling Tiles</b>
	<b>ZEARN STUDENT NOTES</b>

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:  Class: \_\_\_\_\_

*You will need scissors for this lesson.*

**1** Rectangle C:



\_\_\_\_\_ units long \_\_\_\_\_ units wide

Area = \_\_\_\_\_ units<sup>2</sup>

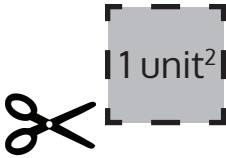


\_\_\_\_\_ units<sup>2</sup>

+ \_\_\_\_\_ units<sup>2</sup>

---

\_\_\_\_\_ units<sup>2</sup>



EXTRA WORKSPACE





**Lesson 10**  
G:5 M:5

**EXIT TICKET**

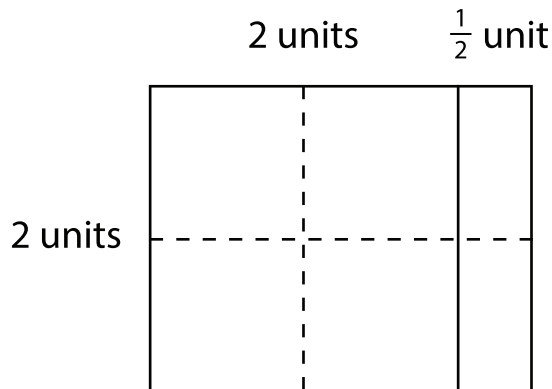
Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. Emma tiled a rectangle and then sketched her work.

Fill in the missing information, and multiply to find the area.



Emma's Rectangle:

\_\_\_\_\_ units long

\_\_\_\_\_ units wide

Area = \_\_\_\_\_ units<sup>2</sup>





Lesson 11  
G:5 M:5

Tiny Tiles

ZEARN STUDENT NOTES

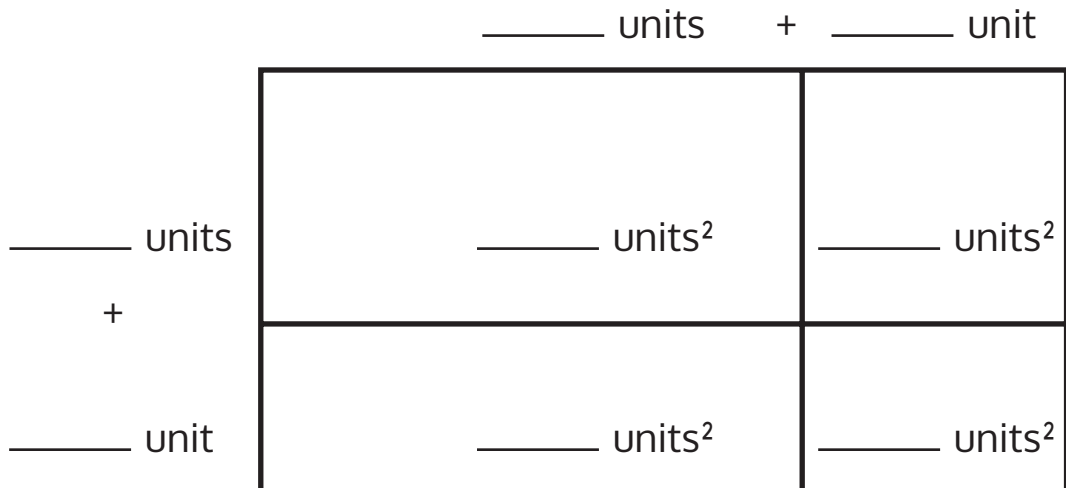
Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

- 1 Solve for the area of the rectangle with the dimensions  $4\frac{1}{2}$  units by  $2\frac{1}{2}$  units.

SHOW YOUR WORK



\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_ units<sup>2</sup>



EXTRA WORKSPACE



**Lesson 11**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. To find the area, Andrea tiled a rectangle and sketched her answer.

Sketch Andrea's rectangle, and find the area. Show your multiplication work.

Rectangle is  $2\frac{1}{2}$  units  $\times$   $2\frac{1}{2}$  units

Area = \_\_\_\_\_





**Lesson 12**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. Measure the rectangle to the nearest  $\frac{1}{4}$  inch with your ruler, and label the dimensions.

Find the area.







**Lesson 13**  
G:5 M:5

**Fraction Dimensions**

**ZEARN STUDENT NOTES**

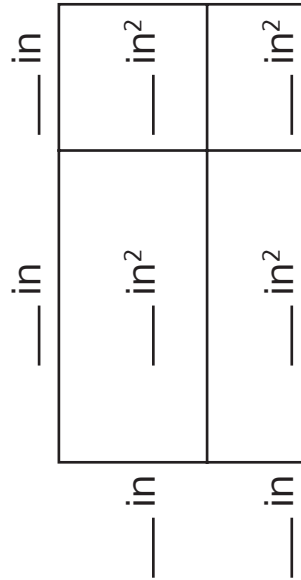
Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:  Class: \_\_\_\_\_

**1** A rectangle is  $16 \frac{1}{2}$  inches long and  $4 \frac{1}{4}$  inches wide.

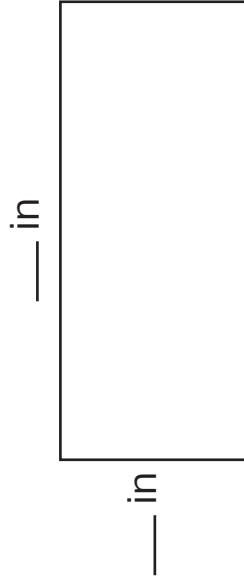
Pick one strategy and use it to find the area.

Distributive Property



Area = \_\_\_\_\_ in<sup>2</sup>

Multiplying Fractions Greater Than 1



Area = \_\_\_\_\_ in<sup>2</sup>

EXTRA WORKSPACE



**Lesson 13**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

Find the area of the following rectangles. Draw an area model if it helps you.

1.  $\frac{7}{2}$  mm  $\times$   $\frac{14}{5}$  mm

2.  $5\frac{7}{8}$  km  $\times$   $\frac{18}{4}$  km





**Lesson 14**  
G:5 M:5

**What's the Area?**

**ZEARN STUDENT NOTES**

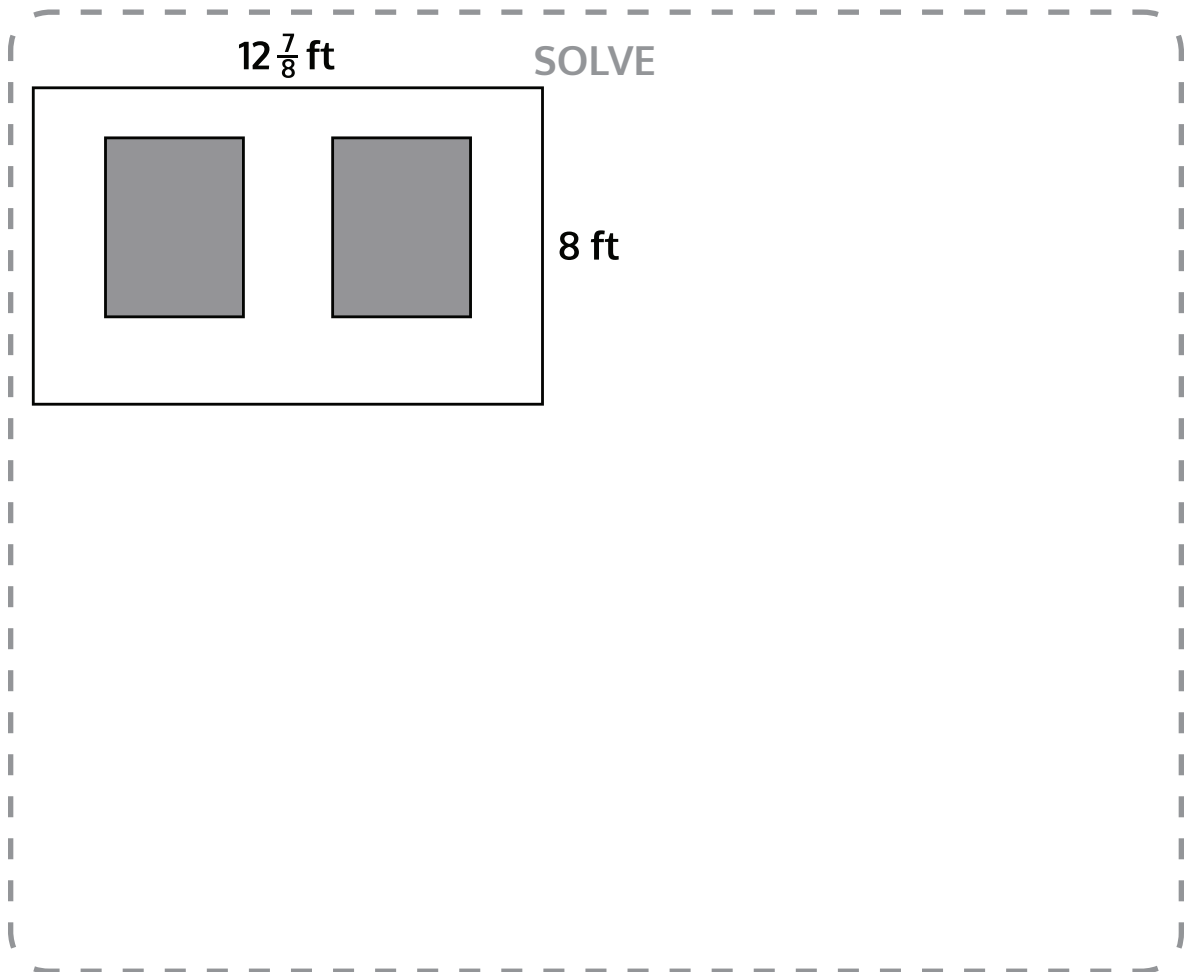
Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

- 1** George decided to use blue paint to paint a wall with two windows. The wall is  $12 \frac{7}{8}$  ft by 8 ft. Both windows are  $3 \frac{1}{2}$  ft by  $4 \frac{1}{2}$  ft rectangles.

Find the area the paint needs to cover.



EXTRA WORKSPACE



**Lesson 14**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. Mr. Klimek made his wife a rectangular vegetable garden. The width is  $5\frac{3}{4}$  ft, and the length is  $9\frac{4}{5}$  ft.

What is the area of the garden?







**Lesson 15**  
G:5 M:5

**Dive into Dimensions**

**ZEARN STUDENT NOTES**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

**1** Some wire is used to make 3 rectangles: A, B, and C. Rectangle B's dimensions are  $\frac{3}{5}$  cm larger than Rectangle A's dimensions, and Rectangle C's dimensions are  $\frac{3}{5}$  cm larger than Rectangle B's dimensions. Rectangle A is 2 cm by  $3\frac{1}{5}$  cm.

What is the total area of all three rectangles?

DRAW

\_\_\_\_\_

SOLVE



2

If a 40-cm coil of wire was used to form the rectangles, how much wire is left?

SOLVE



**Lesson 15**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. Wheat grass is grown in planters that are  $3\frac{1}{2}$  inches by  $1\frac{3}{4}$  inches.

If there is a  $6 \times 6$  array of these planters with no space between them, what is the area covered by the planters?





**Lesson 16**  
G:5 M:5

**Tricky Trapezoids**

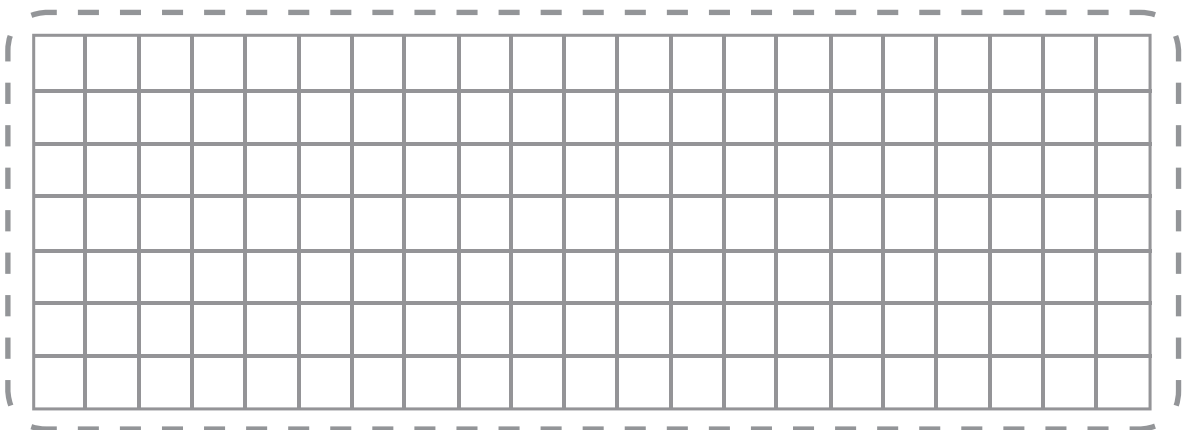
**ZEARN STUDENT NOTES**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

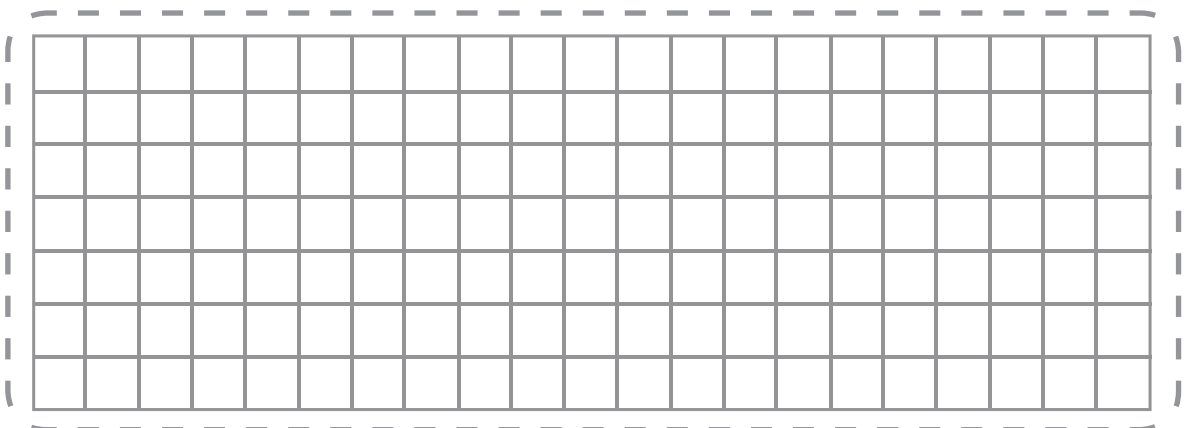
Complete:

Class: \_\_\_\_\_

**1** Draw a trapezoid.



**2** Draw a trapezoid with at least one right angle.



EXTRA WORKSPACE



**Lesson 16**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. Use a ruler and a set square to draw a trapezoid.

2. What attribute must be present for a quadrilateral to also be a trapezoid?







**Lesson 17**  
G:5 M:5

## Parallelogram Properties

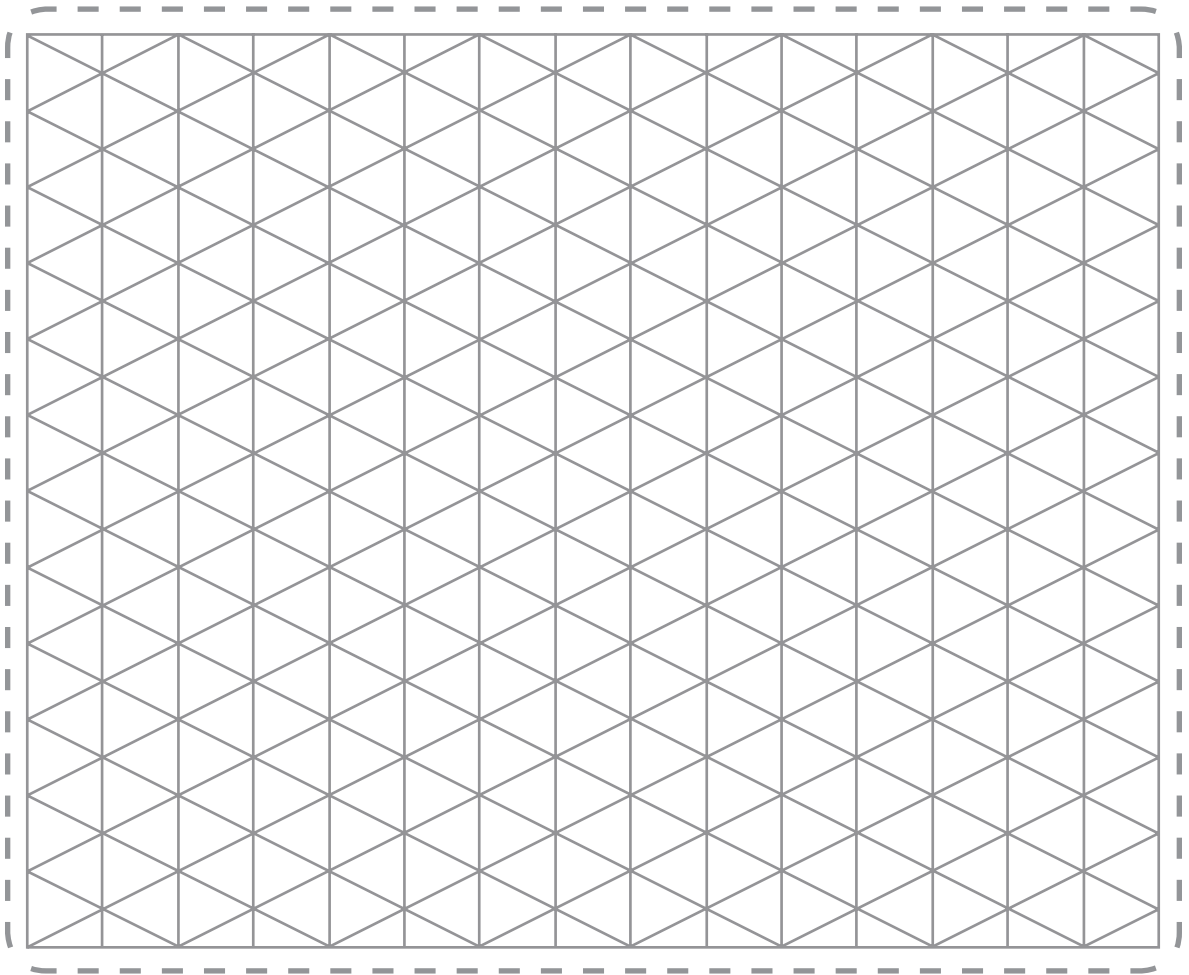
### ZEARN STUDENT NOTES

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

- 1 Draw a parallelogram.



EXTRA WORKSPACE



**Lesson 17**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. Draw a parallelogram.

2. When is a trapezoid also called a parallelogram?





**Lesson 18**  
G:5 M:5

**Rhombuses and Rectangles**

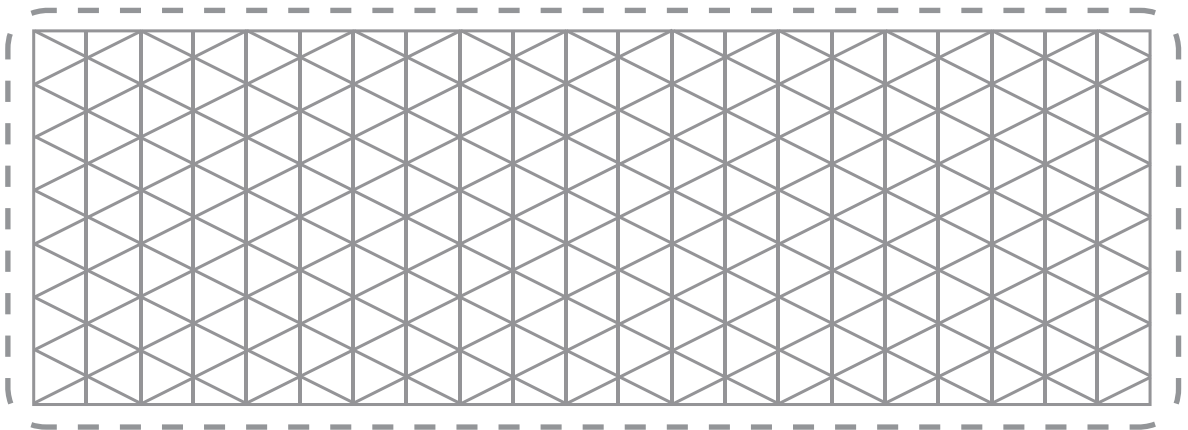
**ZEARN STUDENT NOTES**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

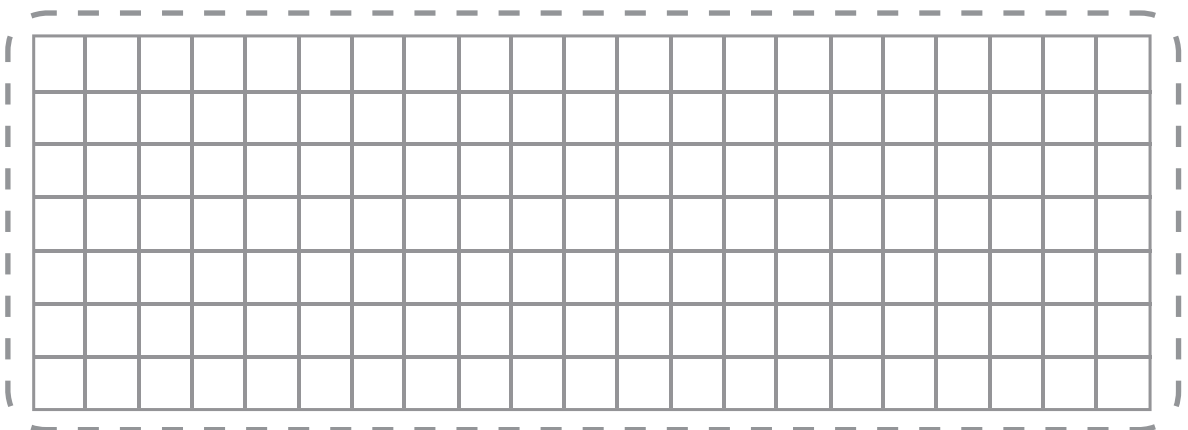
Complete:

Class: \_\_\_\_\_

**1** Draw a rhombus.



**2** Draw a rectangle.



EXTRA WORKSPACE



**Lesson 18**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. Draw a rhombus.

2. Draw a rectangle.







**Lesson 19**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. Draw a square.

2. List the property that must be present to call a rectangle a square.





**Lesson 20**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_


1. Use your tools to draw a square in the space below. Then, fill in the blanks with an attribute. There is more than one answer to some of these.

a. Because a square is a kite, it must have \_\_\_\_\_  
\_\_\_\_\_.

b. Because a square is a rhombus, it must have \_\_\_\_\_  
\_\_\_\_\_.

c. Because a square is a rectangle, it must have \_\_\_\_\_  
\_\_\_\_\_.





d. Because a square is a parallelogram, it must have \_\_\_\_\_  
\_\_\_\_\_.

e. Because a square is a trapezoid, it must have \_\_\_\_\_  
\_\_\_\_\_.

f. Because a square is a quadrilateral, it must have \_\_\_\_\_  
\_\_\_\_\_.



Lesson 21  
G:5 M:5

## Shape Reader

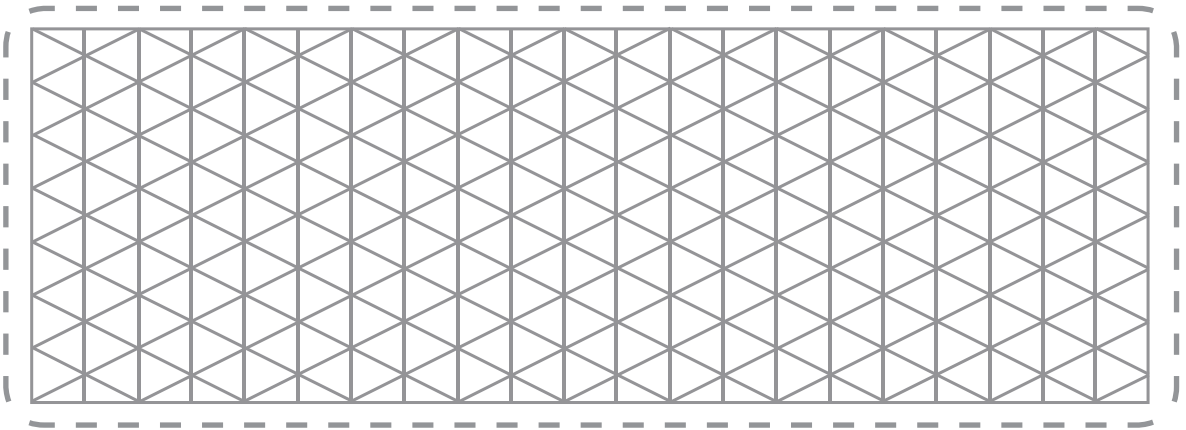
### ZEARN STUDENT NOTES

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

**1** Draw a parallelogram with no right angles.



**2**

List as many names as you can for this shape using the word bank below. Circle the most specific name.

Square  
Quadrilateral  
Rhombus  
Rectangle  
Trapezoid  
Parallelogram

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_



EXTRA WORKSPACE



**Lesson 21**  
G:5 M:5

**EXIT TICKET**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Complete:

Class: \_\_\_\_\_

1. Use the word bank to fill in the blanks.

trapezoids      parallelograms

All \_\_\_\_\_ are \_\_\_\_\_,

but not all \_\_\_\_\_ are \_\_\_\_\_.

2. Use the word bank to fill in the blanks.

squares      rhombuses

All \_\_\_\_\_ are \_\_\_\_\_,

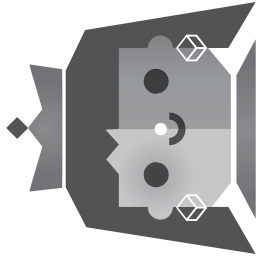
but not all \_\_\_\_\_ are \_\_\_\_\_.







**ZEARN**



Congratulations!  
You completed

**Grade 5 Mission 5**  
Volume, Area, and Shapes

.....  
Name

.....  
Date



.....  
Zearned it!

