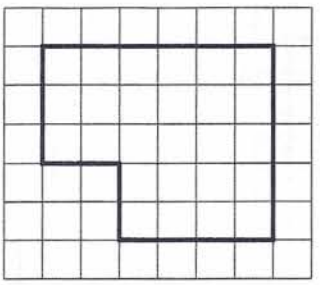
Name _____

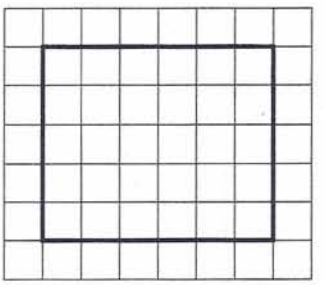
Model Perimeter

COMMON CORE STANDARD—3.MD.D.8
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

Find the perimeter of the figure. Each unit is 1 centimeter.

1. 

22 centimeters

2. 

_____ centimeters

Problem Solving Real World

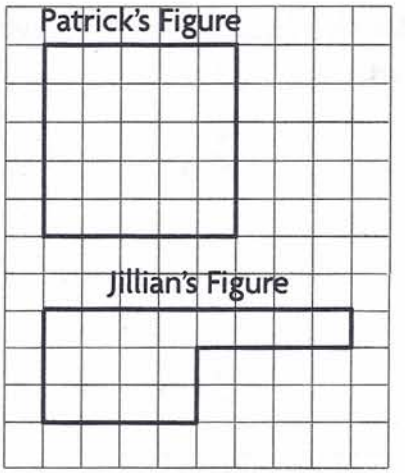
Use the drawing for 3–4. Each unit is 1 centimeter.

3. What is the perimeter of Patrick's figure?

_____

4. How much greater is the perimeter of Jillian's shape than the perimeter of Patrick's figure?

_____



5. WRITE Math Draw a rectangle and another figure that is not a rectangle by tracing lines on grid paper. Describe how to find the perimeter of both figures.

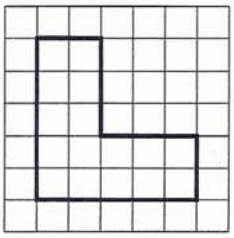
_____

_____

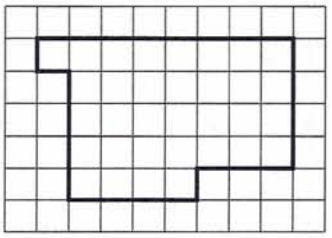
_____

Lesson Check (3.MD.D.8)

1. Find the perimeter of the figure. Each unit is 1 centimeter.



2. Find the perimeter of the figure. Each unit is 1 centimeter.



Spiral Review (3.NF.A.3d, 3.MD.A.1, 3.MD.A.2)

3. Order the fractions from least to greatest.

$$\frac{2}{4}, \frac{2}{3}, \frac{2}{6}$$

4. Kasey's school starts at the time shown on the clock. What time does Kasey's school start?

5. Compare. Write <, >, or =.

$$\frac{4}{8} \bigcirc \frac{3}{8}$$

6. Aiden wants to find the mass of a bowling ball. Which unit should he use?

FOR MORE PRACTICE GO TO THE Personal Math Trainer

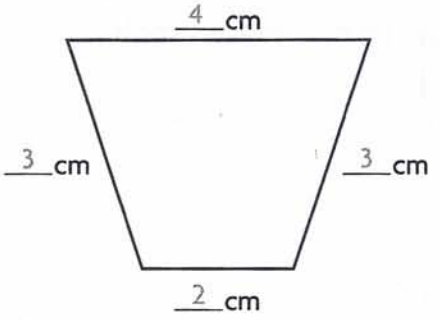
Name _____

Find Perimeter

COMMON CORE STANDARD—3.MD.D.8
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

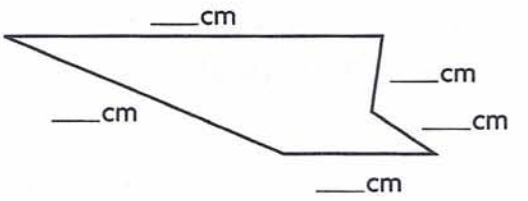
Use a ruler to find the perimeter.

1.



12 centimeters

2.



_____ centimeters

Problem Solving

Draw a picture to solve 3–4.

3. Evan has a square sticker that measures 5 inches on each side. What is the perimeter of the sticker?

_____

4. Sophie draws a shape that has 6 sides. Each side is 3 centimeters. What is the perimeter of the shape?

_____

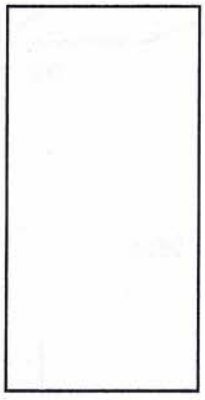
5. WRITE Math Draw two different figures that each have a perimeter of 20 units.

_____

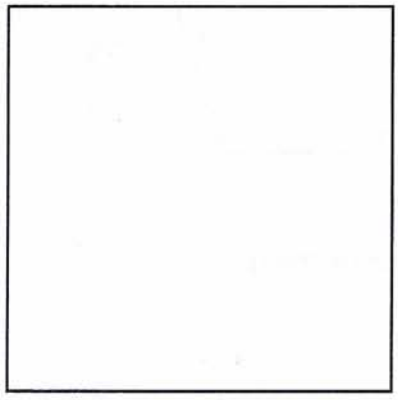
Lesson Check (3.MD.D.8)

Use an inch ruler for 1–2.

1. Ty cut a label the size of the shape shown. What is the perimeter, in inches, of Ty's label?

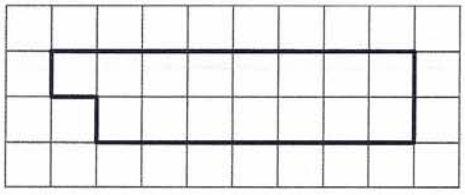


2. Julie drew the shape shown below. What is the perimeter, in inches, of the shape?



Spiral Review (3.NF.A.3d, 3.MD.A.1, 3.MD.A.2, 3.MD.D.8)

3. What is the perimeter of the shape below?



4. Vince arrives for his trumpet lesson after school at the time shown on the clock. What time does Vince arrive for his trumpet lesson?

5. Matthew's small fish tank holds 12 liters. His large fish tank holds 25 liters. How many more liters does his large fish tank hold?

6. Compare. Write $<$, $>$, or $=$.

$\frac{1}{6} \bigcirc \frac{1}{4}$

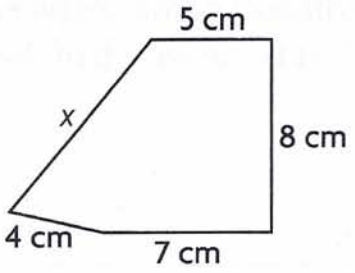
Name _____

Find Unknown Side Lengths

Common Core **COMMON CORE STANDARD—3.MD.D.8**
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

Find the unknown side lengths.

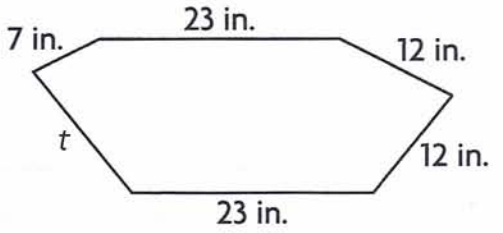
1. Perimeter = 33 centimeters



$5 + 8 + 7 + 4 + x = 33$
$24 + x = 33$
$x = 9$

$x =$ 9 centimeters

2. Perimeter = 92 inches



$t =$ _____ inches

Problem Solving Real World

3. Steven has a rectangular rug with a perimeter of 16 feet. The width of the rug is 5 feet. What is the length of the rug?

_____

4. Kerstin has a square tile. The perimeter of the tile is 32 inches. What is the length of each side of the tile?

_____

5. WRITE Math Explain how to write and solve an equation to find an unknown side length of a rectangle when given the perimeter.

_____

_____

_____

Lesson Check (3.MD.D.8)

1. Jesse is putting a ribbon around a square frame. He uses 24 inches of ribbon. How long is each side of the frame?

2. Davia draws a shape with 5 sides. Two sides are each 5 inches long. Two other sides are each 4 inches long. The perimeter of the shape is 27 inches. What is the length of the fifth side?

Spiral Review (3.OA.A.1, 3.OA.D.8, 3.NF.A.3c, 3.MD.A.1)

3. What multiplication expression represents $7 + 7 + 7 + 7$?

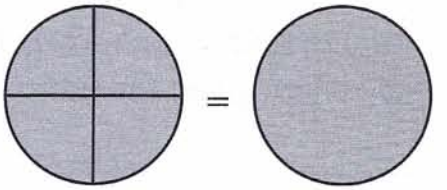
4. Bob bought 3 packs of model cars. He gave 4 cars to Ann. Bob has 11 cars left. How many model cars were in each pack?

5. Randy read a book in the afternoon. He looked at his watch when he started and finished reading. How long did Randy read?

Start

End

6. What fraction and whole number does the model represent?



_____ = _____

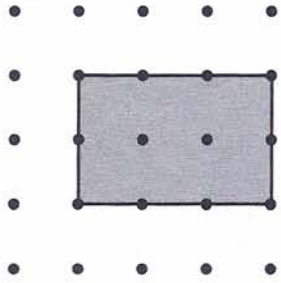
FOR MORE PRACTICE GO TO THE Personal Math Trainer

Name _____

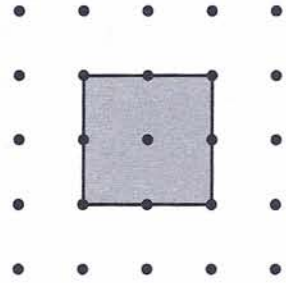
Understand Area

Common Core **COMMON CORE STANDARDS—3.MD.C.5, 3.MD.C.5a** *Geometric measurement: understand concepts of area and relate area to multiplication and to addition.*

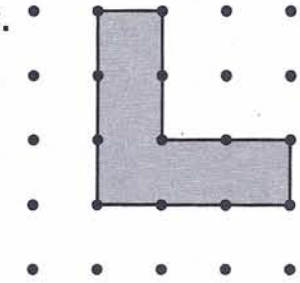
Count to find the area for the shape.

1. 

Area = 6 square units

2. 

Area = _____ square units

3. 

Area = _____ square units

Write *area* or *perimeter* for each situation.

4. carpeting a floor

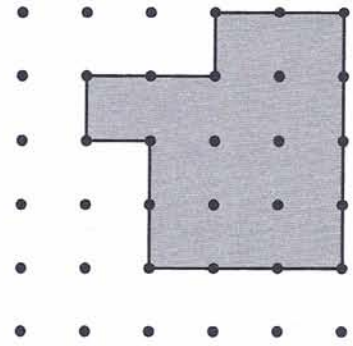
_____

5. fencing a garden

_____

Problem Solving Real World

Use the diagram for 6–7.



6. Roberto is building a platform for his model railroad. What is the area of the platform?

_____

7. Roberto will put a border around the edges of the platform. How much border will he need?

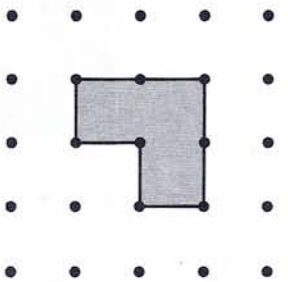
_____

8. WRITE Math Draw a rectangle using dot paper. Find the area, and explain how you found your answer.

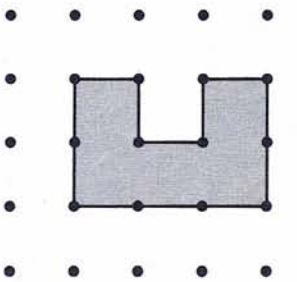
_____

Lesson Check (3.MD.C.5, 3.MD.C.5a)

1. Josh used rubber bands to make the shape below on his geoboard. What is the area of the shape?



2. Wilma drew the shape below on dot paper. What is the area of the shape she drew?



Spiral Review (3.OA.C.7, 3.NF.A.1, 3.MD.A.1, 3.MD.A.2)

3. Leonardo knows it is 42 days until summer break. How many weeks is it until Leonardo's summer break? (Hint: There are 7 days in a week.)

4. Nan cut a submarine sandwich into 4 equal parts and ate one part. What fraction represents the part of the sandwich Nan ate?

5. Wanda is eating breakfast at fifteen minutes before eight. What time is this? Use A.M. or P.M.

6. Dick has 2 bags of dog food. Each bag contains 5 kilograms of food. How many kilograms of food does Dick have in all?

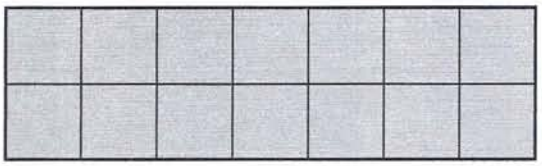
FOR MORE PRACTICE GO TO THE Personal Math Trainer

Name _____

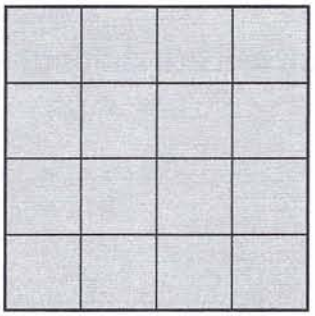
Measure Area

COMMON CORE STANDARDS—
3.MD.C.5b, 3.MD.C.6 *Geometric measurement: understand concepts of area and relate area to multiplication and to addition.*

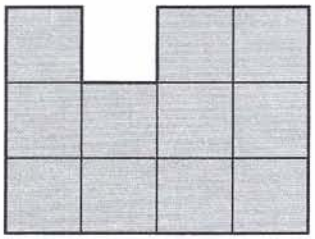
Count to find the area of the shape. Each unit square is 1 square centimeter.

1. 

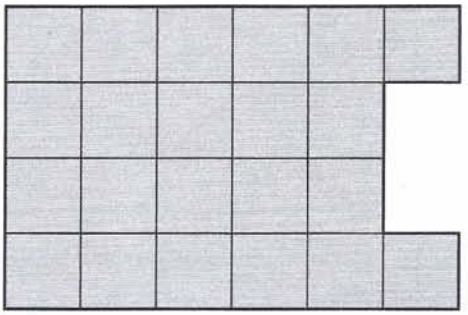
Area = 14 square centimeters

2. 

Area = _____ square centimeters

3. 

Area = _____ square centimeters

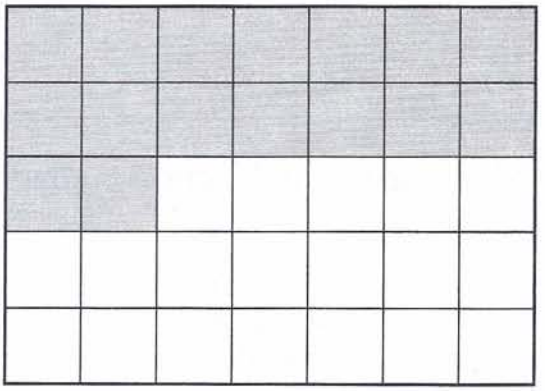
4. 

Area = _____ square centimeters

Problem Solving Real World

Alan is painting his deck gray. Use the diagram at the right for 5. Each unit square is 1 square meter.

Alan's Deck



5. What is the area of the deck that Alan has already painted gray?

_____

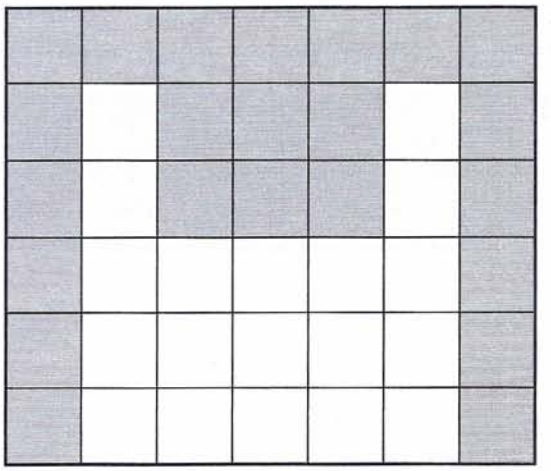
6. WRITE Math Explain how to find the area of a figure using square tiles.

_____

_____

Lesson Check (3.MD.C.5b, 3.MD.C.6)

Each unit square in the diagram is 1 square foot.



1. How many square feet are shaded?

_____

2. What is the area that has NOT been shaded?

_____

Spiral Review (3.OA.A.3, 3.NF.A.1, 3.NF.A.3b, 3.MD.A.2)

3. Sonya buys 6 packages of rolls. There are 6 rolls in each package. How many rolls does Sonya buy?

_____

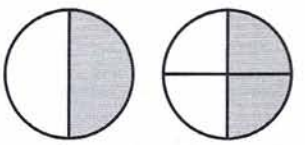
4. Charlie mixed 6 liters of juice with 2 liters of soda to make fruit punch. How many liters of fruit punch did Charlie make?

_____

5. What fraction of the circle is shaded?

_____

6. Use the model on the right to name a fraction that is equivalent to $\frac{1}{2}$.



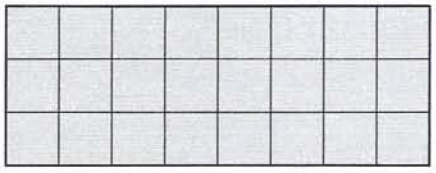
_____

Name _____

Use Area Models

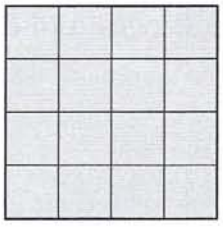
Common Core **COMMON CORE STANDARDS—3.MD.C.7, 3.MD.C.7a** *Geometric measurement: understand concepts of area and relate area to multiplication and to addition.*

Find the area of each shape. Each unit square is 1 square foot.

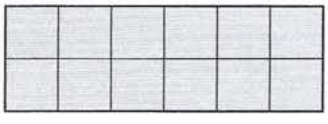
1. 

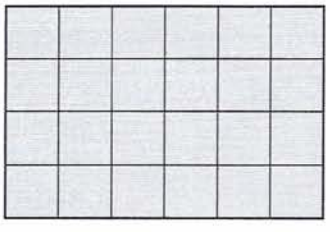
There are 3 rows of 8 unit squares.
$3 \times 8 = 24$

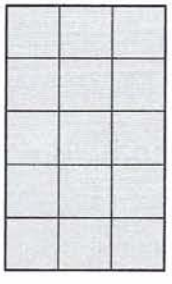
24 square feet

2. 

Find the area of each shape.
Each unit square is 1 square meter.

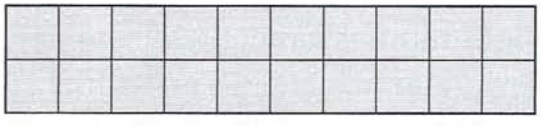
3. 

4. 

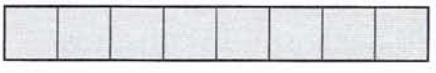
5. 

Problem Solving Real World

6. Landon made a rug for the hallway. Each unit square is 1 square foot. What is the area of the rug?



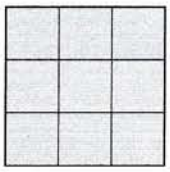
7. Eva makes a border at the top of a picture frame. Each unit square is 1 square inch. What is the area of the border?



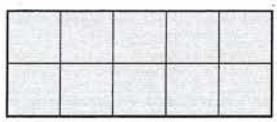
8. WRITE Math Describe each of the three methods you can use to find the area of a rectangle.

Lesson Check (3.MD.C.7, 3.MD.C.7a)

1. The entrance to an office has a tiled floor. Each square tile is 1 square meter. What is the area of the floor?



2. Ms. Burns buys a new rug. Each unit square is 1 square foot. What is the area of the rug?



Spiral Review (3.OA.A.4, 3.NF.A.3d, 3.MD.A.1, 3.MD.D.8)

3. Compare the fractions. Write $<$, $>$, or $=$.

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

4. Claire bought 6 packs of baseball cards. Each pack had the same number of cards. If Claire bought 48 baseball cards in all, how many cards were in each pack?

5. Austin left for school at 7:35 A.M. He arrived at school 15 minutes later. What time did Austin arrive at school?

6. Wyatt's room is a rectangle with a perimeter of 40 feet. The width of the room is 8 feet. What is the length of the room?

FOR MORE PRACTICE GO TO THE Personal Math Trainer

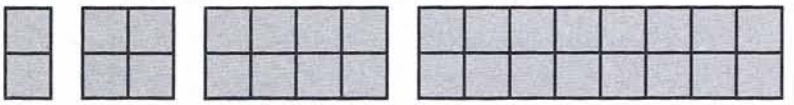
Name _____

Problem Solving • Area of Rectangles

COMMON CORE STANDARD—3.MD.C.7b
Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

Use the information for 1–3.

An artist makes rectangular murals in different sizes. Below are the available sizes. Each unit square is 1 square meter.



1. Complete the table to find the area of each mural.

Mural	Length (in meters)	Width (in meters)	Area (in square meters)
A	2	1	2
B	2	2	4
C	2		
D	2		

2. Find and describe a pattern of how the length changes and how the width changes for murals A through D.

_____

_____

3. How do the areas of the murals change when the width changes?

_____

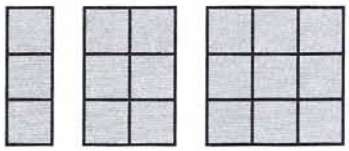
4. WRITE *Math* Write and solve an area problem that illustrates the use of the *find a pattern* strategy.

_____

_____

Lesson Check (3.MD.C.7b)

1. Lauren drew the designs below. Each unit square is 1 square centimeter. If the pattern continues, what will be the area of the fourth figure?



2. Henry built one garden that is 3 feet wide and 3 feet long. He also built a garden that is 3 feet wide and 6 feet long, and a garden that is 3 feet wide and 9 feet long. How do the areas change?

Spiral Review (3.OA.A.3, 3.NBT.A.3, 3.NF.A.1, 3.MD.C.5b, 3.MD.C.6)

3. Joe, Jim, and Jack share 27 football cards equally. How many cards does each boy get?

4. Nita uses $\frac{1}{3}$ of a carton of 12 eggs. How many eggs does she use?

5. Brenda made 8 necklaces. Each necklace has 10 large beads. How many large beads did Brenda use to make the necklaces?

6. Neal is tiling his kitchen floor. Each square tile is 1 square foot. Neal uses 6 rows of tiles with 9 tiles in each row. What is the area of the floor?

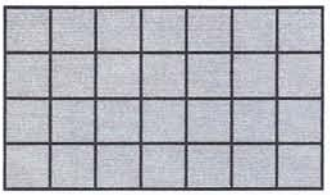
FOR MORE PRACTICE GO TO THE Personal Math Trainer

Name _____

Area of Combined Rectangles

Common Core **COMMON CORE STANDARDS—3.MD.C.7c, 3.MD.C.7d** *Geometric measurement: understand concepts of area and relate area to multiplication and to addition.*

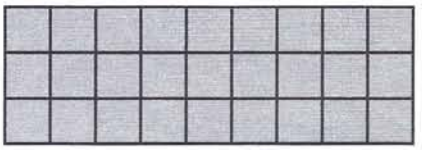
Use the Distributive Property to find the area. Show your multiplication and addition equations.

1. 

$4 \times 2 = 8; 4 \times 5 = 20$

$8 + 20 = 28$

28 square units

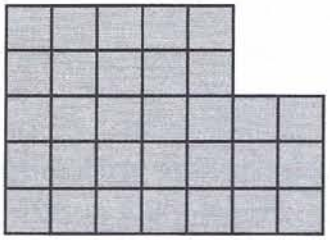
2. 

_____

_____

_____ square units

Draw a line to break apart the shape into rectangles. Find the area of the shape.

3. 

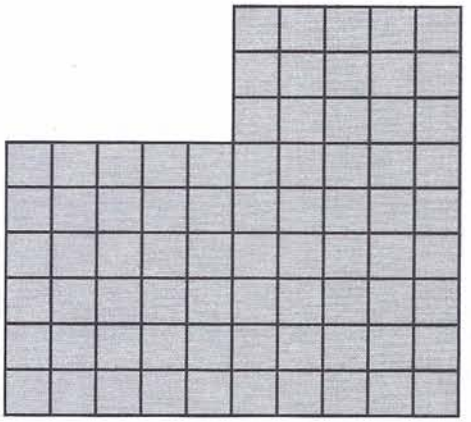
Rectangle 1: _____ × _____ = _____

Rectangle 2: _____ × _____ = _____

_____ + _____ = _____ square units

Problem Solving Real World

A diagram of Frank's room is at right. Each unit square is 1 square foot.



4. Draw a line to divide the shape of Frank's room into rectangles.

5. What is the total area of Frank's room?

_____ square feet

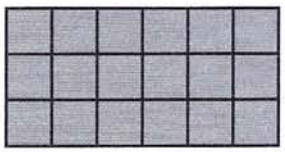
6. WRITE Math Draw a figure that is not a rectangle and find its area. Use grid paper and show each step.

_____

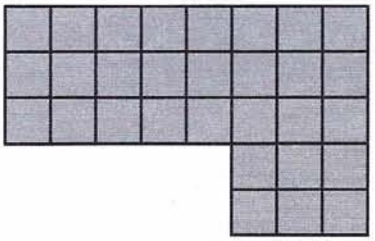
_____

Lesson Check (3.MD.C.7c, 3.MD.C.7d)

1. The diagram shows Ben's backyard. Each unit square is 1 square yard. What is the area of Ben's backyard?



2. The diagram shows a room in an art gallery. Each unit square is 1 square meter. What is the area of the room?



Spiral Review (3.OA.B.6, 3.NF.A.1, 3.MD.B.4, 3.MD.D.8)

3. Naomi needs to solve $28 \div 7 = \square$. What related multiplication fact can she use to find the unknown number?

4. Karen drew a triangle with side lengths 3 centimeters, 4 centimeters, and 5 centimeters. What is the perimeter of the triangle?

5. The rectangle is divided into equal parts. What is the name of the equal parts?

6. Use an inch ruler. To the nearest half inch, how long is this line segment?

Name _____

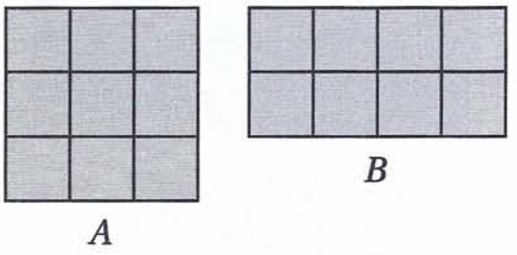
Same Perimeter, Different Areas

Common Core

COMMON CORE STANDARD—3.MD.D.8
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

Find the perimeter and the area.
Tell which rectangle has a greater area.

1.



A: Perimeter = 12 units;

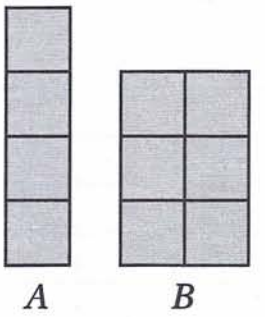
Area = 9 square units

B: Perimeter = _____;

Area = _____

Rectangle _____ has a greater area.

2.



A: Perimeter = _____;

Area = _____

B: Perimeter = _____;

Area = _____

Rectangle _____ has a greater area.

Problem Solving Real World

3. Tara's and Jody's bedrooms are shaped like rectangles. Tara's bedroom is 9 feet long and 8 feet wide. Jody's bedroom is 7 feet long and 10 feet wide. Whose bedroom has the greater area? **Explain.**

_____

_____

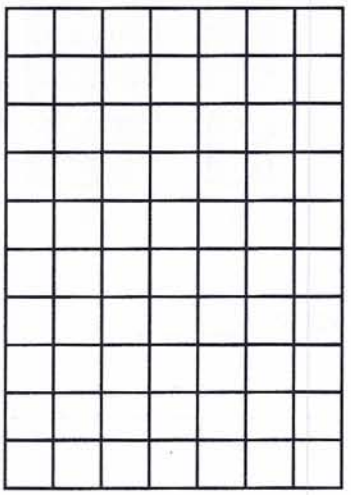
4. WRITE Math Draw three examples of rectangles that have the same perimeter, but different areas. Note which of the areas is greatest and which is the least.

_____

_____

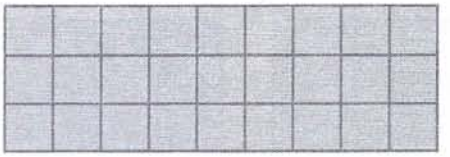
Lesson Check (3.MD.D.8)

1. Draw a rectangle that has a perimeter of 12 units and an area of 8 square units.

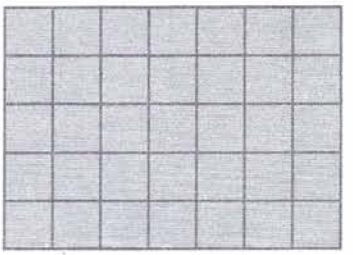


2. Find the perimeter and the area. Tell which rectangle has the greater area.

A



B



A: Perimeter = _____ units

Area = _____ square units

B: Perimeter = _____ units

Area = _____ square units

Rectangle _____ has a greater area.

Spiral Review (3.MD.C.7, 3.MD.C.7a, 3.MD.D.8)

3. Kerrie covers a table with 8 rows of square tiles. There are 7 tiles in each row. What is the area that Kerrie covers in square units?

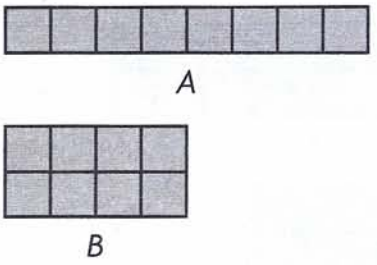
4. Von has a rectangular workroom with a perimeter of 26 feet. The length of the workroom is 6 feet. What is the width of Von's workroom?

Name _____

Same Area, Different Perimeters

COMMON CORE STANDARD—3.MD.D.8
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

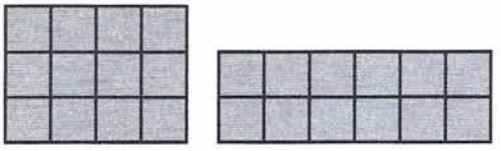
Find the perimeter and the area. Tell which rectangle has a greater perimeter.

1. 

A: Area = 8 square units;
Perimeter = 18 units

B: Area = _____;
Perimeter = _____

Rectangle ____ has a greater perimeter.

2. 

A: Area = _____;
Perimeter = _____

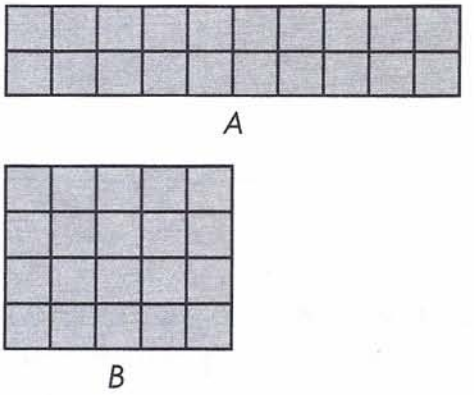
B: Area = _____;
Perimeter = _____

Rectangle ____ has a greater perimeter.

Problem Solving Real World

Use the tile designs for 3–4.

Beth's Tile Designs



3. Compare the areas of Design A and Design B.

_____

_____

4. Compare the perimeters. Which design has the greater perimeter?

_____

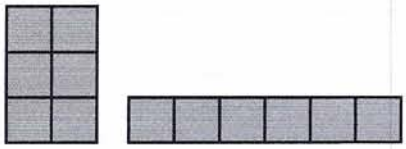
5. WRITE Math Draw two rectangles with different perimeters but the same area.

_____

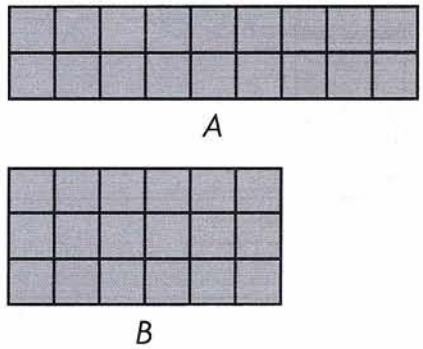
_____

Lesson Check (3.MD.D.8)

1. Jake drew two rectangles. Which rectangle has the greater perimeter?



2. Alyssa drew two rectangles. Which rectangle has the greater perimeter?



Spiral Review (3.OA.D.8, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3b)

3. Marsha was asked to find the value of $8 - 3 \times 2$. She wrote a wrong answer. What is the correct answer?

4. What fraction names the point on the number line?

5. Kyle drew three line segments with these lengths: $\frac{2}{4}$ inch, $\frac{2}{3}$ inch, and $\frac{2}{6}$ inch. List the fractions in order from least to greatest.

6. On Monday, $\frac{3}{8}$ inch of snow fell. On Tuesday, $\frac{5}{8}$ inch of snow fell. Write a statement that correctly compares the snow amounts.