Chapter 11

School-Home Letter

Vocabulary

area The measure of unit squares needed to cover a flat surface

perimeter The distance around a shape

unit square A square with a side length of 1 unit that is used to measure area

Dear Family,

During the next few weeks, our math class will be learning about perimeter and area of shapes.

You can expect to see homework that provides practice with measuring and finding perimeter, and finding area by counting squares, using addition, or using multiplication.

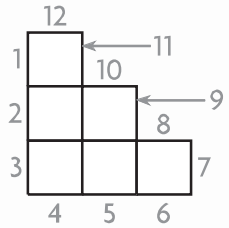
Here is a sample of how your child will be taught to find perimeter.

MODEL Find Perimeter

These are two ways to find perimeter.

Count units.

Find the perimeter of the shape by counting each unit around the shape.

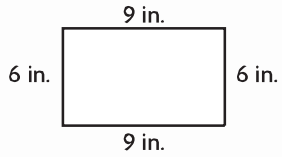


Perimeter is the distance around a shape.

So, the perimeter is 12 units.

Use addition.

Find the perimeter of the rectangle.



Perimeter = length + width + length + width

Add: 9 + 6 + 9 + 6 = 30 inches

So, the perimeter is 30 inches.

Tips

Finding Unknown Side Lengths

Sometimes not all lengths of the sides of a shape are given. If you know the perimeter, you can add the lengths of the sides you know and use an equation to find the unknown side length.

Activity

Have your child practice finding the perimeter and area of items around the house. Find and measure the sides of items that have plane shapes, such as an envelope, a place mat, a square potholder, a pennant, or a rug.

Capítulo 11

Carta para la casa

Vocabulario

área La medida del número de los cuadrados de una unidad que se necesitan para cubrir una superficie plana

perímetro La distancia alrededor de una figura

cuadrado de una unidad Un cuadrado cuyo lado mide 1 unidad y que se usa para medir un área

unidad cuadrada Una unidad que mide el área como del pies cuadrado, metro cuadrado y así sucesivamente

Querida familia,

Durante las próximas semanas, en la clase de matemáticas aprenderemos acerca del perímetro y el área de las figuras.

Llevaré a la casa tareas que sirven para practicar cómo medir y hallar el perímetro, además de hallar el área contando cuadrados usando la suma o la multiplicación.

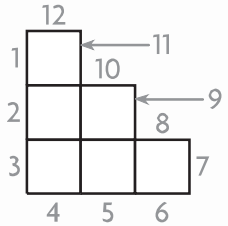
Este es un ejemplo de la manera como aprenderemos a hallar el perímetro.

MODELO Hallar el perímetro

Estas son dos maneras de hallar el perímetro.

Contar unidades.

Halla el perímetro de la figura contando cada unidad alrededor de la figura.

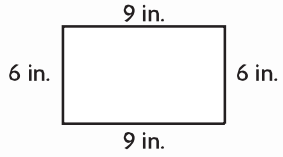


El perímetro es la distancia alrededor de una figura.

Por tanto, el perímetro es 12 unidades.

Usar la suma.

Halla el perímetro del rectángulo.



Perímetro = largo + ancho + largo + ancho

Sumo: 9 + 6 + 9 + 6 = 30 pulgadas

Por tanto, el perímetro es 30 pulgadas.

Pistas

Hallar longitudes desconocidas de los lados

A veces no se dan las longitudes de los lados de una figura. Si conoces el perímetro, puedes sumar las longitudes de los lados que conoces y usar una ecuación para hallar la longitud desconocida del lado.

Actividad

Pida a su hijo que practique hallando el perímetro y el área de algunos objetos de la casa. Hallen y midan los lados de objetos que tengan formas planas, como un sobre, un individual para la mesa, un agarrador de ollas cuadrado, un banderín o un tapete.

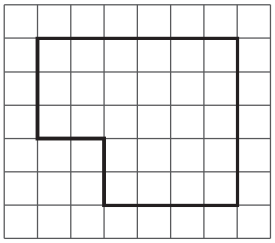
Name _____

Model Perimeter

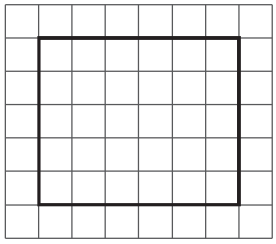
COMMON CORE STANDARD CC.3.MD.8

Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

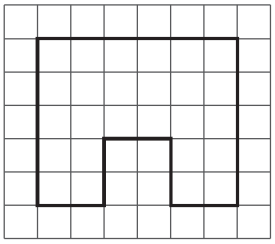
Find the perimeter of the shape. Each unit is 1 centimeter.

1. 

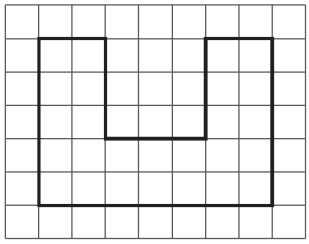
22 centimeters

2. 

22 centimeters

3. 

26 centimeters

4. 

30 centimeters

Problem Solving REAL WORLD

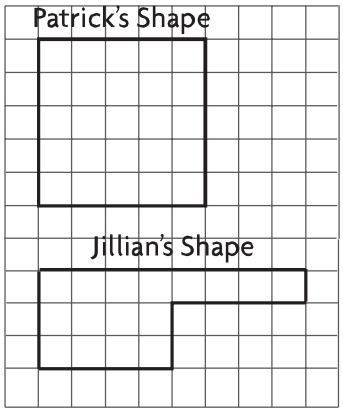
Use the drawing for 5–6. Each unit is 1 centimeter.

5. What is the perimeter of Patrick's shape?

20 centimeters

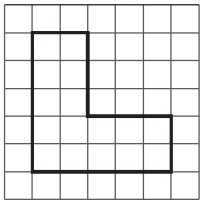
6. How much greater is the perimeter of Jillian's shape than the perimeter of Patrick's shape?

2 centimeters



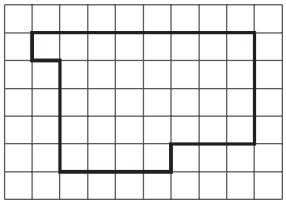
Lesson Check (CC.3.MD.8)

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



Ⓐ 14 centimeters
Ⓑ 16 centimeters
Ⓒ 18 centimeters
● 20 centimeters

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



Ⓐ 19 centimeters
● 26 centimeters
Ⓒ 33 centimeters
Ⓓ 55 centimeters

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

3. Which lists the fractions in order from least to greatest? (Lesson 9.5)

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

Ⓐ $\frac{2}{3}, \frac{2}{4}, \frac{2}{6}$
● $\frac{2}{6}, \frac{2}{4}, \frac{2}{3}$
Ⓒ $\frac{2}{4}, \frac{2}{3}, \frac{2}{6}$
Ⓓ $\frac{2}{3}, \frac{2}{6}, \frac{2}{4}$

4. Kasey's school starts at the time shown on the clock. What time does Kasey's school start? (Lesson 10.1)

Ⓐ 6:40
● 8:30
Ⓑ 8:06
Ⓓ 9:30

5. Michael and Dex are comparing fraction strips. Which statement is NOT correct? (Lesson 9.2)

Ⓐ $\frac{1}{2} < \frac{2}{2}$
● $\frac{4}{8} < \frac{3}{8}$
Ⓑ $\frac{2}{3} > \frac{1}{3}$
Ⓓ $\frac{4}{6} > \frac{2}{6}$

6. Aiden wants to find the mass of a bowling ball. Which unit should he use? (Lesson 10.8)

Ⓐ liter
Ⓒ gram
Ⓑ inch
● kilogram

Name _____

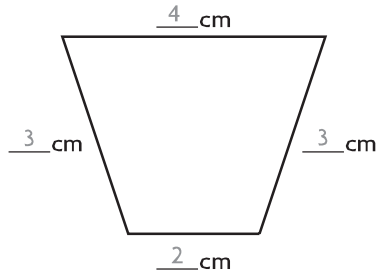
Find Perimeter

COMMON CORE STANDARD CC.3.MD.8

Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

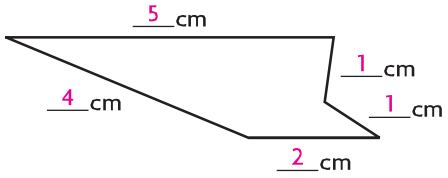
Use a ruler to find the perimeter.

1.



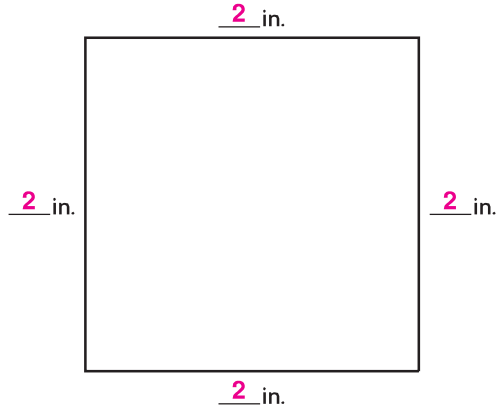
12 centimeters

2.



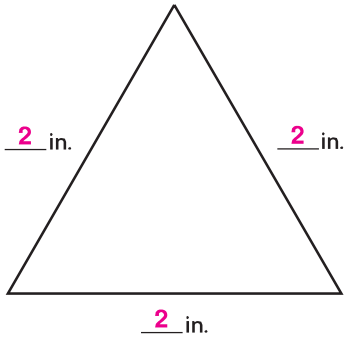
13 centimeters

3.



8 inches

4.



6 inches

Problem Solving REAL WORLD

Draw a picture to solve 5–6.

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

20 inches

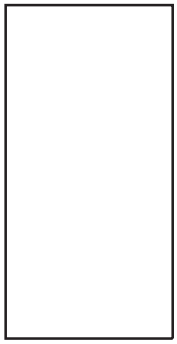
6. Sophie draws a shape that has 6 sides. Each side is 3 centimeters. What is the perimeter of the shape?

18 centimeters

Lesson Check (CC.3.MD.8)

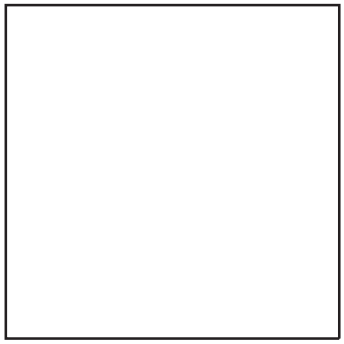
Use an inch ruler for 1–2.

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



Ⓐ 4 inches
● 6 inches
Ⓑ 5 inches
Ⓓ 7 inches

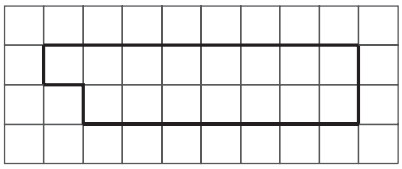
2. Julie drew the shape shown below. What is the perimeter, in inches, of the shape?



Ⓐ 2 inches
Ⓒ 6 inches
Ⓑ 4 inches
● 8 inches

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

3. What is the perimeter of the shape below? (Lesson 11.1)



Ⓐ 8 units
● 20 units
Ⓑ 10 units
Ⓓ 22 units

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? (Lesson 10.2)

Ⓐ 3:26 A.M.
Ⓑ 4:26 A.M.
● 3:26 P.M.
Ⓓ 4:26 P.M.

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? (Lesson 10.9)

Ⓐ 12 liters
Ⓒ 25 liters
● 13 liters
Ⓓ 37 liters

6. Cecila and Sasha are comparing fraction strips. Which statement is correct? (Lesson 9.3)

Ⓐ $\frac{1}{2} < \frac{1}{3}$
Ⓒ $\frac{1}{4} > \frac{1}{2}$
Ⓑ $\frac{1}{8} > \frac{1}{6}$
● $\frac{1}{6} < \frac{1}{4}$

Name _____

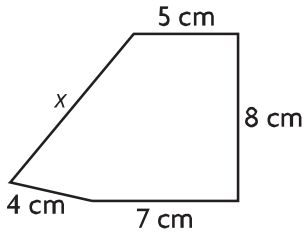
Find Unknown Side Lengths

ALGEBRA
Lesson 11.3

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

Find the unknown side lengths.

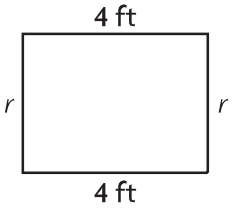
1. Perimeter = 33 centimeters



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

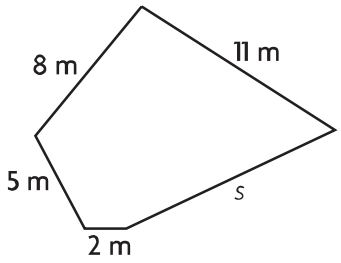
$x =$ 9 centimeters

2. Perimeter = 14 feet



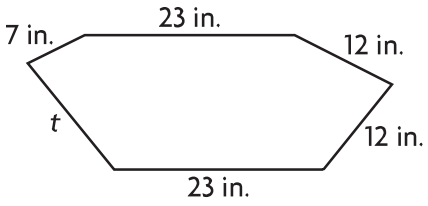
$r =$ 3 feet

3. Perimeter = 37 meters



$s =$ 11 meters

4. Perimeter = 92 inches



$t =$ 15 inches

Problem Solving REAL WORLD

5. 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?

3 feet

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

8 inches

Lesson Check (CC.3.MD.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?

Ⓐ 4 inches

Ⓑ 5 inches

● 6 inches

Ⓓ 8 inches

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?

● 9 inches

Ⓑ 13 inches

Ⓒ 14 inches

Ⓓ 18 inches

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

3. Which of the following represents $7 + 7 + 7 + 7$? (Lesson 3.2)

Ⓐ 4×4

● 4×7

Ⓒ 6×7

Ⓓ 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? (Lesson 7.10)

Ⓐ 18

Ⓑ 11

Ⓒ 7

● 5

5. Randy looked at his watch when he started and finished reading. How long did Randy read? (Lesson 10.3)

Start

End

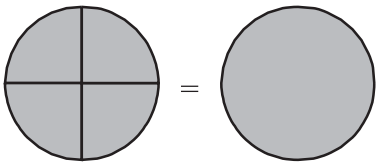
Ⓐ 55 minutes

● 45 minutes

Ⓒ 35 minutes

Ⓓ 15 minutes

6. Which statement does the model represent? (Lesson 8.6)



● $\frac{4}{4} = 1$

Ⓑ $\frac{3}{4} = 1$

Ⓒ $\frac{2}{4} = 1$

Ⓓ $\frac{1}{4} = 1$

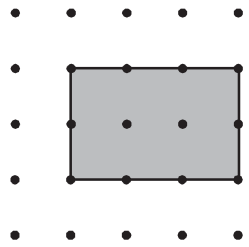
Name _____

Understand Area

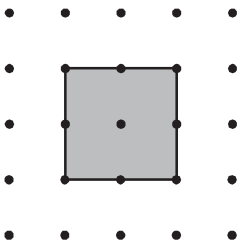
COMMON CORE STANDARDS CC.3.MD.5, CC3.MD.5a

Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

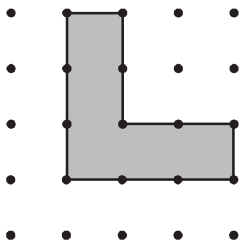
Count to find the area for the shape.

1. 

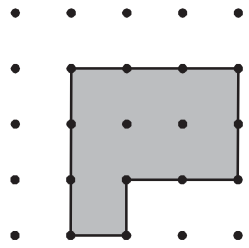
Area = 6 square units

2. 

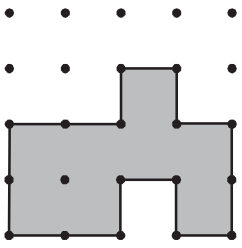
Area = 4 square units

3. 

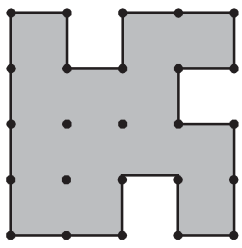
Area = 5 square units

4. 

Area = 7 square units

5. 

Area = 8 square units

6. 

Area = 13 square units

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

7. carpeting a floor

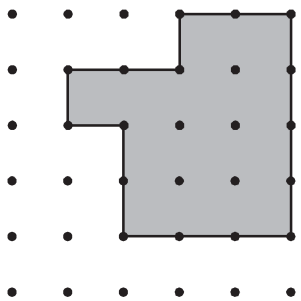
area

8. fencing a garden

perimeter

Problem Solving REAL WORLD

Use the diagram for 9–10.



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

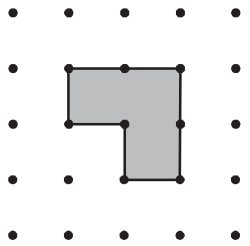
12 square units

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

16 units

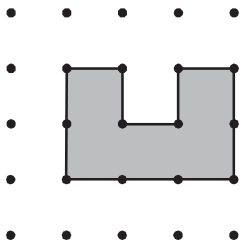
Lesson Check (CC.3.MD.5, CC.3.MD.5a)

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



- 3 square units
- B 4 square units
- C 5 square units
- D 6 square units

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



- A 4 square units
- 5 square units
- C 6 square units
- D 7 square units

Spiral Review (CC.3.OA.7, CC.3.NF.1, CC.3.MD.1, CC.3.MD.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.) (Lesson 7.7)

- A 5 weeks
- C 7 weeks
- 6 weeks
- D 8 weeks

4. Nan cut a submarine sandwich into 4 equal parts and ate one part. What fraction represents the part of the sandwich Nan ate? (Lesson 8.3)

- $\frac{1}{4}$
- C $\frac{4}{4}$
- B $\frac{1}{3}$
- D $\frac{4}{1}$

5. Wanda is eating breakfast. Which is a reasonable time for Wanda to be eating breakfast? (Lesson 10.2)

- 7:45 A.M.
- B 7:45 P.M.
- C 2:15 A.M.
- D 2:15 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? (Lesson 10.8)

- A 3 kilograms
- C 7 kilograms
- B 5 kilograms
- 10 kilograms

Name _____

Measure Area

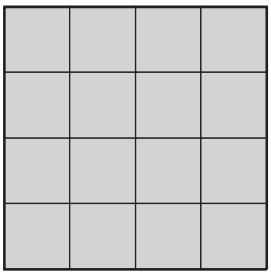
COMMON CORE STANDARDS CC.3.MD.5b, CC.3.MD.6

Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

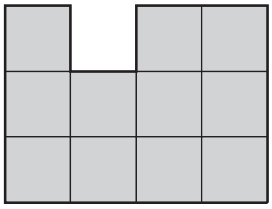
Count to find the area of the shape. Each unit square is 1 square centimeter.

1. 

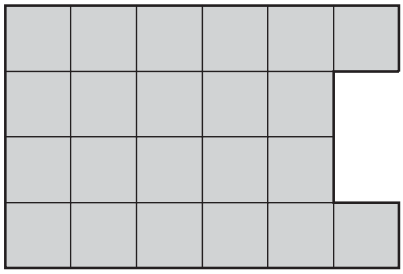
Area = 14 square centimeters

2. 

Area = 16 square centimeters

3. 

Area = 11 square centimeters

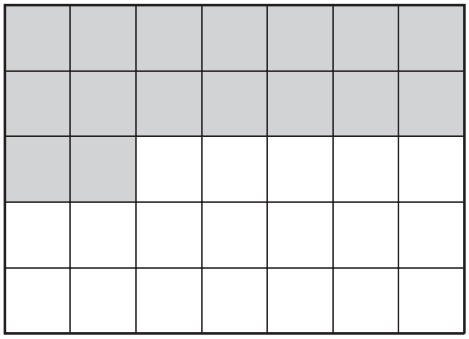
4. 

Area = 22 square centimeters

Problem Solving REAL WORLD

Alan is painting his deck gray. Use the diagram at the right for 5–6. Each unit square is 1 square meter.

Alan's Deck



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

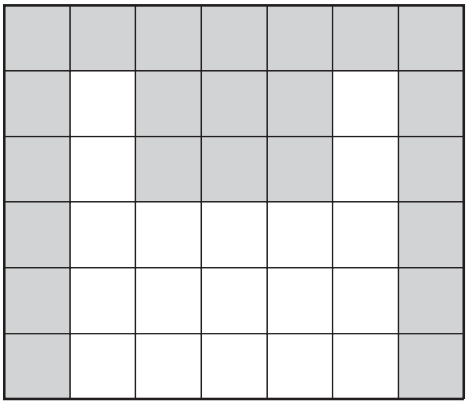
16 square meters

6. What is the area of the deck that Alan has left to paint?

19 square meters

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

Each unit square in the diagram is 1 square foot.



1. How many square feet are shaded?

   Ⓐ 19 square feet

   Ⓑ 21 square feet

   ● 23 square feet

   Ⓓ 25 square feet

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

   ● 19 square feet

   Ⓑ 21 square feet

   Ⓒ 23 square feet

   Ⓓ 25 square feet

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

3. Sonya buys 6 packages of rolls. There are 6 rolls in each package. How many rolls does Sonya buy? (Lesson 4.3)

   Ⓐ 42 Ⓒ 24

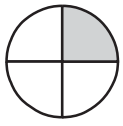
   ● 36 Ⓓ 12

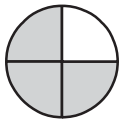
4. Charlie mixed 6 liters of juice with 2 liters of soda to make fruit punch. How many liters of fruit punch did Charlie make? (Lesson 10.9)

   Ⓐ 3 liters ● 8 liters

   Ⓑ 4 liters Ⓓ 12 liters

5. Which drawing shows $\frac{2}{3}$ of the circle shaded? (Lesson 8.4)

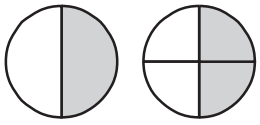
   Ⓐ 

   Ⓒ 

   Ⓑ 

   ● 

6. Use the models to name a fraction that is equivalent to $\frac{1}{2}$. (Lesson 9.7)



   Ⓐ $\frac{2}{1}$ ● $\frac{2}{4}$

   Ⓑ $\frac{2}{2}$ Ⓓ $\frac{4}{4}$

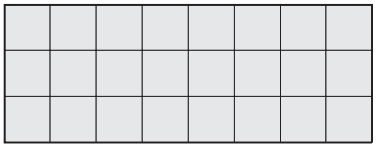
Name _____

Use Area Models

COMMON CORE STANDARDS CC.3.MD.7, CC.3.MD.7a

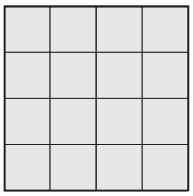
Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

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

1. 

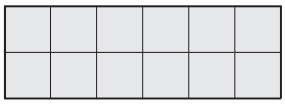
There are 3 rows of 8 unit squares.
$3 \times 8 = 24$

24 square feet

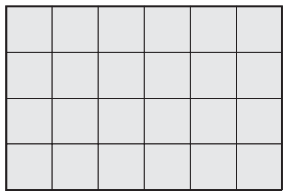
2. 

16 square feet

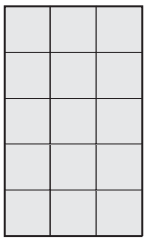
Find the area of each shape.
Each unit square is 1 square meter.

3. 

12 square meters

4. 

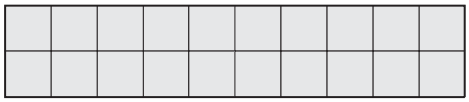
24 square meters

5. 

15 square meters

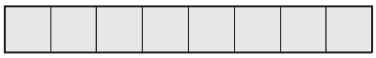
Problem Solving REAL WORLD

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



20 square feet

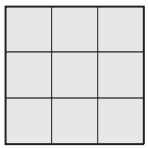
7. Eva makes a border at the top of a picture frame. Each unit square is 1 square inch. What is the area of the border?



8 square inches

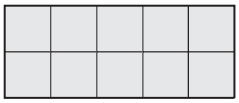
Lesson Check (CC.3.MD.7, CC.3.MD.7a)

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



Ⓐ 8 square meters
● 9 square meters
Ⓒ 10 square meters
Ⓓ 12 square meters

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



Ⓐ 5 square feet
Ⓑ 7 square feet
● 10 square feet
Ⓓ 12 square feet

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

3. Ann and Bill are comparing fraction strips. Which statement is correct? (Lesson 9.2)

Ⓐ $\frac{3}{8} > \frac{5}{8}$
Ⓑ $\frac{3}{4} < \frac{1}{4}$
Ⓒ $\frac{3}{6} > \frac{4}{6}$
● $\frac{1}{3} < \frac{2}{3}$

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? (Lesson 7.8)

Ⓐ 54
● 8
Ⓑ 42
Ⓓ 6

5. Austin left for school at 7:35 A.M.. He arrived at school 15 minutes later. What time did Austin arrive at school? (Lesson 10.4)

Ⓐ 7:40 A.M.
Ⓒ 7:55 A.M.
● 7:50 A.M.
Ⓓ 8:00 A.M.

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? (Lesson 11.3)

Ⓐ 5 feet
Ⓒ 16 feet
● 12 feet
Ⓓ 32 feet

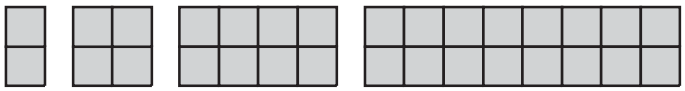
Name _____

Problem Solving • Area of Rectangles

COMMON CORE STANDARD CC.3.MD.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	4	8
D	2	8	16

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

For each mural, the width doubles and the length stays the same.

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

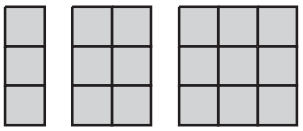
For each mural, the area doubles.

4. Dan built a deck that is 5 feet long and 5 feet wide. He built another deck that is 5 feet long and 7 feet wide. He built a third deck that is 5 feet long and 9 feet wide. How do the areas change?

The areas are 25, 35, and 45 square feet. As the width changes, the areas increase by 10 square feet.

Lesson Check (CC.3.MD.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 shape?



Ⓐ 10 square centimeters

● 12 square centimeters

Ⓒ 14 square centimeters

Ⓓ 16 square centimeters

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?

Ⓐ The areas do not change.

Ⓑ The areas double.

Ⓒ The areas increase by 3 square feet.

● The areas increase by 9 square feet.

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

3. Joe, Jim, and Jack share 27 football cards equally. How many cards does each boy get? (Lesson 7.4)

Ⓐ 7

Ⓑ 8

● 9

Ⓓ 10

4. Nita uses $\frac{1}{3}$ of a carton of 12 eggs. How many eggs does she use? (Lesson 8.7)

Ⓐ 3

● 4

Ⓒ 6

Ⓓ 9

5. Brenda made 8 necklaces. Each necklace has 10 large beads. How many large beads did Brenda use to make the necklaces? (Lesson 5.4)

● 80

Ⓑ 85

Ⓒ 90

Ⓓ 100

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? (Lesson 11.6)

Ⓐ 15 square feet

Ⓑ 52 square feet

● 54 square feet

Ⓓ 57 square feet

Name _____

Area of Combined Rectangles

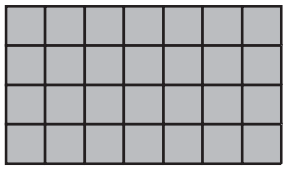
COMMON CORE STANDARDS CC.3.MD.7c, CC.3.MD.7d

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.

Possible equations are given.

1.

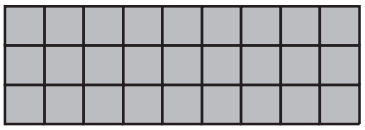


$4 \times 2 = 8; 4 \times 5 = 20$

$8 + 20 = 28$

28 square units

2.



$3 \times 4 = 12; 3 \times 5 = 15$

$12 + 15 = 27$

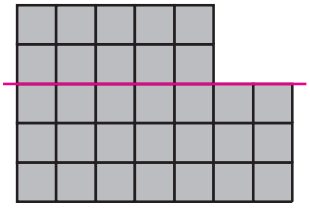
27 square units

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

Possible lines are shown.

Possible equations are given.

3.

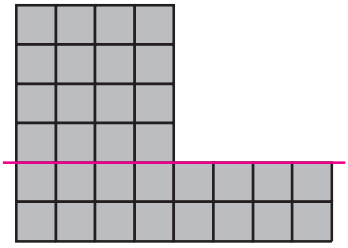


Rectangle 1: 2 × 5 = 10

Rectangle 2: 3 × 7 = 21

10 + 21 = 31 square units

4.



Rectangle 1: 4 × 4 = 16

Rectangle 2: 2 × 8 = 16

16 + 16 = 32 square units

Problem Solving REAL WORLD

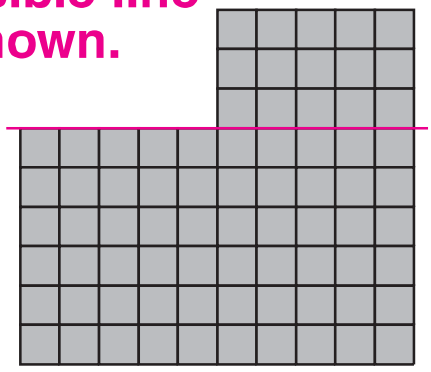
A diagram of Frank's room is at right. Each unit square is 1 square foot.

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

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

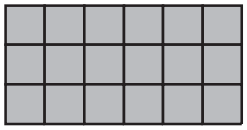
75 square feet

Possible line is shown.



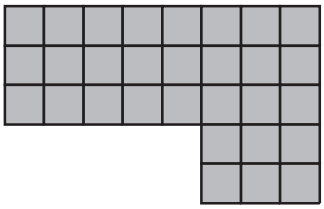
Lesson Check (CC.3.MD.7c, CC.3.MD.7d)

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



Ⓐ 12 square yards
Ⓑ 16 square yards
● 18 square yards
Ⓓ 24 square yards

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



Ⓐ 24 square meters
● 30 square meters
Ⓒ 36 square meters
Ⓓ 40 square meters

Spiral Review (CC.3.OA.6, CC.3.NF.1, CC.3.MD.4, CC.3.MD.8)

3. Naomi needs to solve $28 \div 7 = \square$. What related multiplication fact can she use to find the unknown number? (Lesson 6.7)

Ⓐ $3 \times 7 = 21$
● $4 \times 7 = 28$
Ⓒ $5 \times 7 = 35$
Ⓓ $6 \times 7 = 42$

4. Karen drew a triangle with side lengths 3 centimeters, 4 centimeters, and 5 centimeters. What is the perimeter of the triangle? (Lesson 11.2)

Ⓐ 7 centimeters
Ⓑ 9 centimeters
Ⓒ 11 centimeters
● 12 centimeters

5. The rectangle is divided into equal parts. What is the name of the equal parts? (Lesson 8.1)

Ⓐ half
● fourth
Ⓑ third
Ⓓ sixth

6. Use an inch ruler. To the nearest half inch, how long is this line segment? (Lesson 10.6)

Ⓐ 1 inch
● 2 inches
Ⓑ $1\frac{1}{2}$ inches
Ⓓ $2\frac{1}{2}$ inches

Name _____

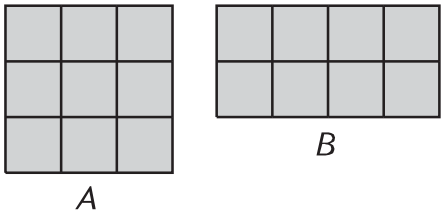
Same Perimeter, Different Areas

COMMON CORE STANDARD CC.3.MD.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.

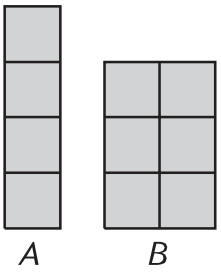


A: Perimeter = 12 units;
Area = 9 square units

B: Perimeter = 12 units;
Area = 8 square units

Rectangle A has a greater area.

2.



A: Perimeter = 10 units;
Area = 4 square units

B: Perimeter = 10 units;
Area = 6 square units

Rectangle B 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**.

Tara's; $9 \times 8 = 72$ and $7 \times 10 = 70$; $72 > 70$

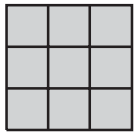
4. Mr. Sanchez has 16 feet of fencing to put around a rectangular garden. He wants the garden to have the greatest possible area. How long should the sides of the garden be?

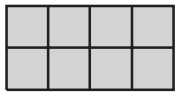
All four sides should be 4 feet long.

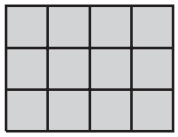
TEST PREP

Lesson Check (CC.3.MD.8)

1. Which shape has a perimeter of 12 units and an area of 8 square units?

Ⓐ 

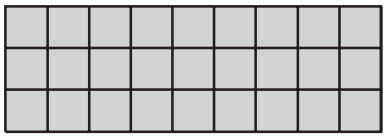
● 

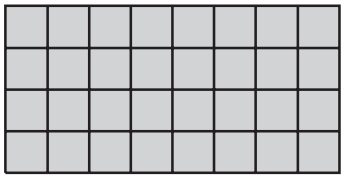
Ⓒ 

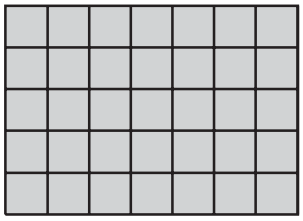
Ⓓ 

2. All four rectangles below have the same perimeter. Which rectangle has the greatest area?

Ⓐ 

Ⓑ 

Ⓒ 

● 

Spiral Review (CC.s.MD.7, CC.3.MD.7a, CC.3.MD.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? (Lesson 11.6)

Ⓐ 15 square units

Ⓑ 35 square units

Ⓒ 42 square units

● 56 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? (Lesson 11.3)

● 7 feet

Ⓑ 13 feet

Ⓒ 20 feet

Ⓓ 26 feet

Name _____

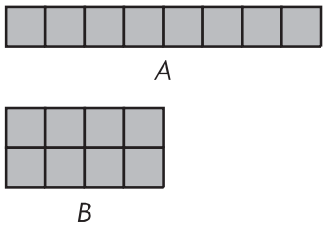
Same Area, Different Perimeters

COMMON CORE STANDARD CC.3.MD.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.

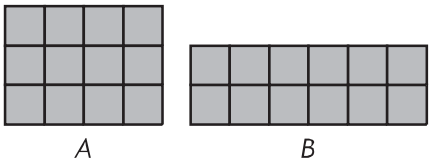


A: Area = 8 square units;
Perimeter = 18 units

B: Area = 8 square units;
Perimeter = 12 units

Rectangle A has a greater perimeter.

2.

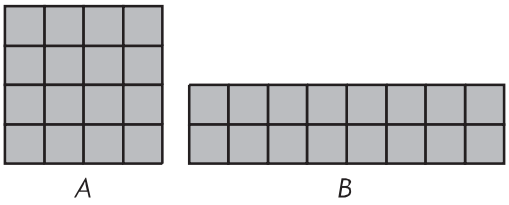


A: Area = 12 square units;
Perimeter = 14 units

B: Area = 12 square units;
Perimeter = 16 units

Rectangle B has a greater perimeter.

3.



A: Area = 16 square units;
Perimeter = 16 units

B: Area = 16 square units;
Perimeter = 20 units

Rectangle B has a greater perimeter.

Problem Solving REAL WORLD

Use the tile designs for 4–5.

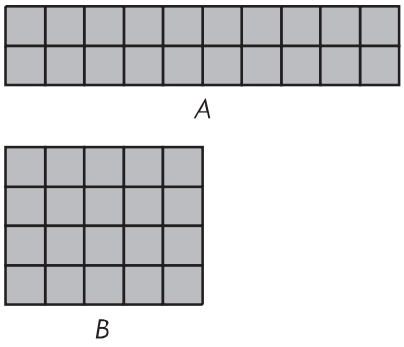
4. Compare the areas of Design A and Design B.

The areas are the same, 20 square units.

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

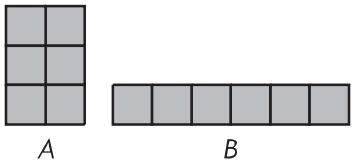
Design A

Beth's Tile Designs



Lesson Check (CC.3.MD.8)

1. Jake drew two rectangles. Which statement is true?



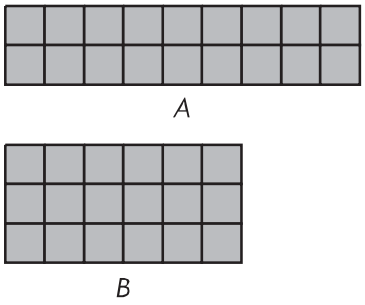
Ⓐ The perimeters are the same.

Ⓑ The area of *A* is greater.

Ⓒ The perimeter of *A* is greater.

● The perimeter of *B* is greater.

2. Alyssa drew two rectangles. Which statement is true?



Ⓐ The perimeter of *B* is greater.

● The perimeter of *A* is greater.

Ⓒ The area of *B* is greater.

Ⓓ The perimeters are the same.

Spiral Review (CC.3.OA.8, CC.3.NF.2a, CC.3.NF.2b, CC.3.NF.3d)

3. Marsha was asked to find the value of $8 - 3 \times 2$. She wrote a wrong answer. Which is the correct answer? (Lesson 7.11)

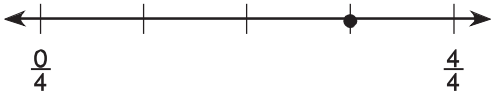
Ⓐ 22

Ⓑ 10

Ⓒ 4

● 2

4. What fraction names the point on the number line? (Lesson 8.5)



Ⓐ $\frac{1}{4}$

Ⓑ $\frac{2}{3}$

● $\frac{3}{4}$

Ⓓ $\frac{3}{1}$

5. Kyle drew three line segments with these lengths: $\frac{2}{4}$ inch, $\frac{2}{3}$ inch, and $\frac{2}{6}$ inch. Which list orders the fractions from least to greatest? (Lesson 9.5)

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

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

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

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

6. On Monday, $\frac{3}{8}$ inch of snow fell. On Tuesday, $\frac{5}{8}$ inch of snow fell. Which statement correctly compares the snow amounts? (Lesson 9.2)

Ⓐ $\frac{3}{8} = \frac{5}{8}$

● $\frac{3}{8} < \frac{5}{8}$

Ⓒ $\frac{5}{8} < \frac{3}{8}$

Ⓓ $\frac{3}{8} > \frac{5}{8}$

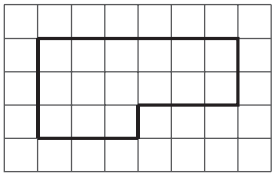
Name _____

COMMON CORE STANDARDS CC.3.MD.5, CC.3.MD.5a, CC.3.MD.5b, CC.3.MD.6, CC.3.MD.7a, CC.3.MD.7b, CC.3.MD.7c, CC.3.MD.7d, CC3.MD.8 ALSO CC.3.OA.3, CC.3.OA.7, CC.3.OA.9, CC.3.NBT.2, CC.3.MD.4

Chapter 11 Extra Practice

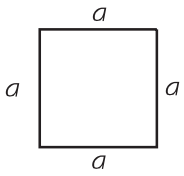
Lessons 11.1, 11.3

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



18 centimeters

2. The square has a perimeter of 28 inches. What is the length of each side of the square?

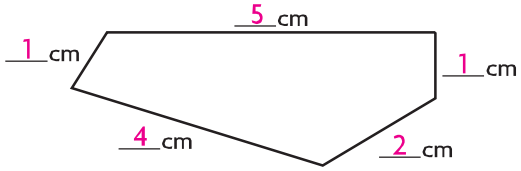


7 inches

Lesson 11.2

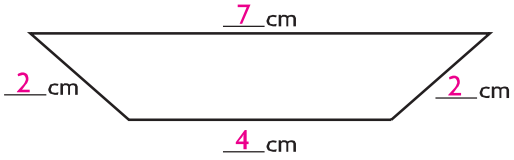
Use a centimeter ruler to find the perimeter.

1.



13 centimeters

2.

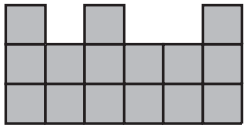


15 centimeters

Lessons 11.4 - 11.6

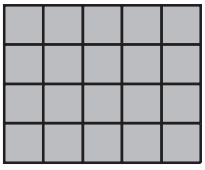
Find the area of the shape.
Each unit square is 1 square inch.

1.



Area = 15 square inches

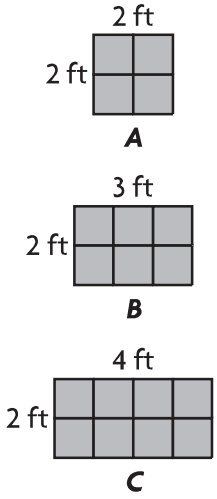
2.



20 square inches

Lesson 11.7

Use the rectangles at the right for 1–2.



1. How do the length and width change from Rectangle *A* to Rectangle *B*?

   The width increases by 1 foot.

   The length stays the same.

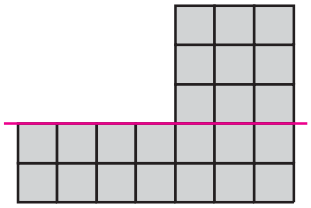
2. How do the areas change from Rectangle *A* to Rectangle *B* to Rectangle *C*?

   The areas increase by 2 square feet.

Lesson 11.8 Possible lines are shown.

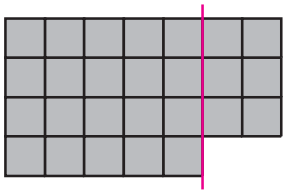
Draw a line to break apart the shape into rectangles.
Find the area of the shape. Possible equations are given.

1.



Rectangle 1: 3 × 3 = 9;
Rectangle 2: 2 × 7 = 14;
9 + 14 = 23 square units

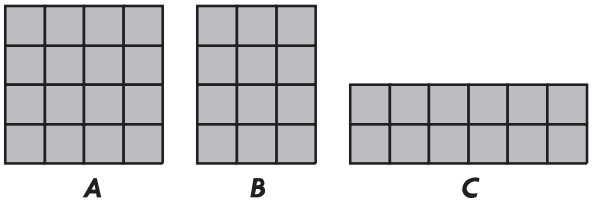
2.



Rectangle 1: 4 × 5 = 20;
Rectangle 2: 3 × 2 = 6;
20 + 6 = 26 square units

Lessons 11.9 - 11.10

Find the perimeter and area of each rectangle.
Use your results to answer questions 1–2.



1. Which two rectangles have the same perimeter?

   Rectangles A and C

2. Which two rectangles have the same area?

   Rectangles B and C