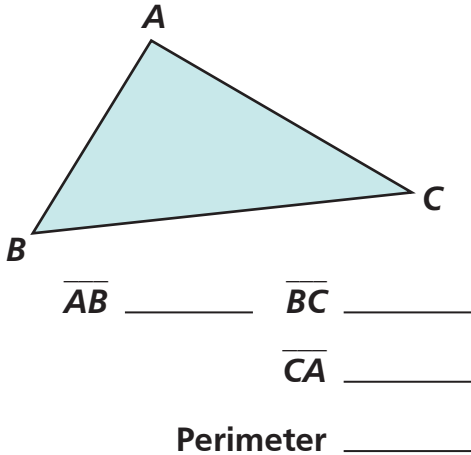


Length and Perimeter

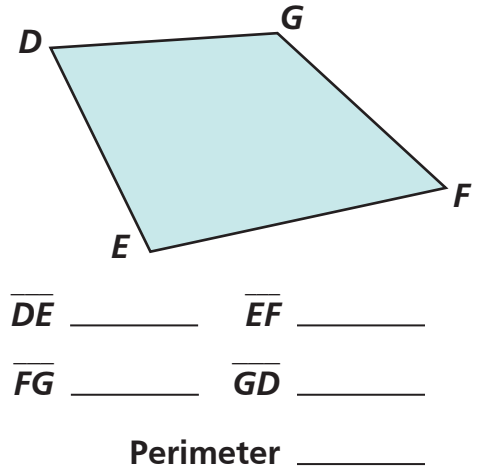
NCTM Standards 1, 4, 6

Measure the sides of each figure to the nearest cm.
Record the perimeter in cm.

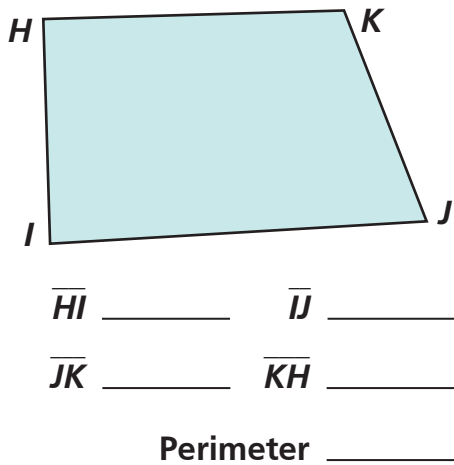
1



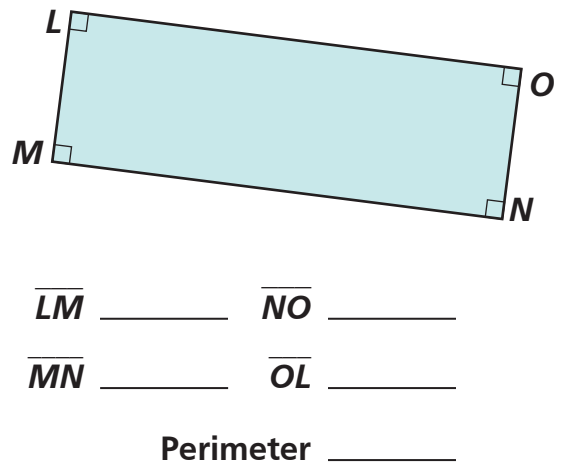
2



3

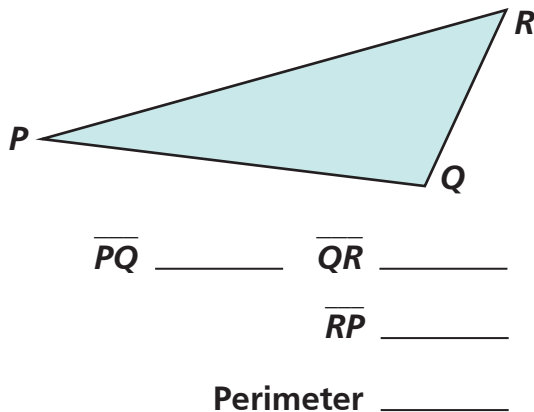


4

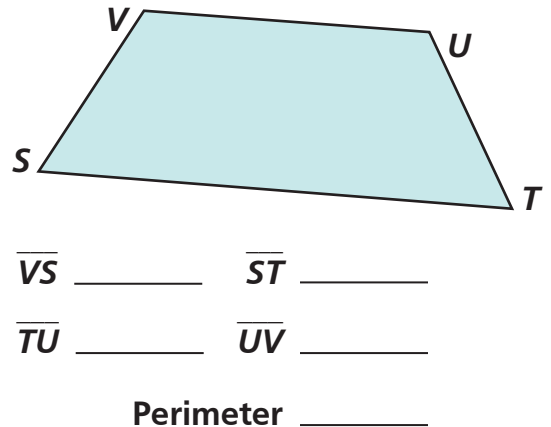


Measure the sides of each figure to the nearest $\frac{1}{2}$ inch.
Record the perimeter in inches.

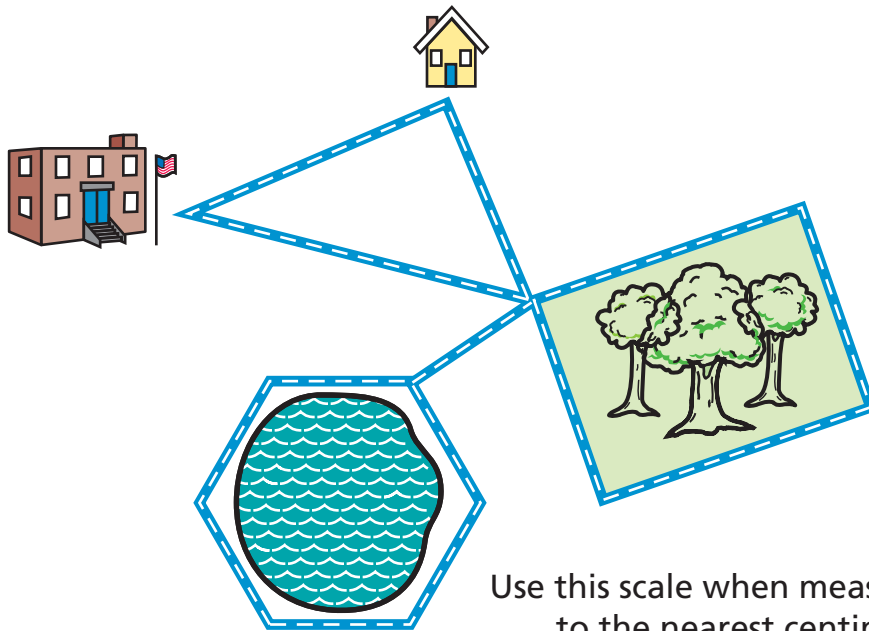
5







6



Use the map and a ruler to measure and answer the questions below.



Key

-  home
-  school
-  park
-  lake

Use this scale when measuring to the nearest centimeter.

1 cm = 0.5 mile

7 Tanya walks from home directly to school in the morning. After school, she walks to the edge of the park and then back home. How far does she walk? _____ miles

8 On Saturday, Tanya walks to the lake, and then jogs the path around the lake. What is the distance she jogs? _____ miles

9 When Tanya feels like taking a long walk, she walks around the park. How long is the walk around the park? _____ miles

10 Challenge How many miles does Tanya travel if she walks directly from her home, around the park, and back home again? _____ miles

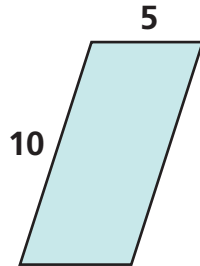
How many miles does she travel if she walks directly from her home, around the lake, and back home again? _____ miles

Perimeter Formulas

NCTM Standards 1, 3, 4, 7, 8

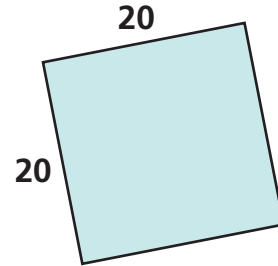
Find the perimeter of each parallelogram.

1



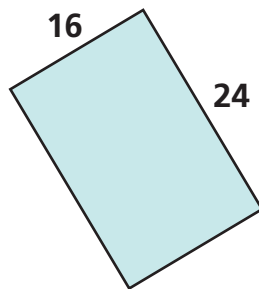
Perimeter: _____ units

2



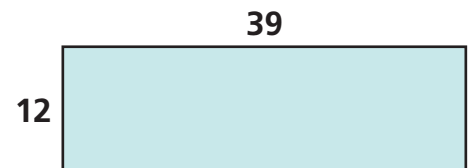
Perimeter: _____ units

3



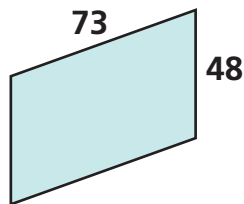
Perimeter: _____ units

4



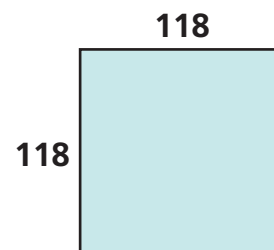
Perimeter: _____ units

5



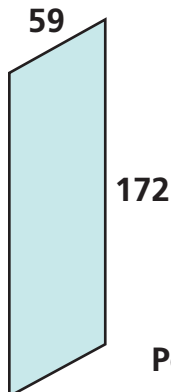
Perimeter: _____ units

6



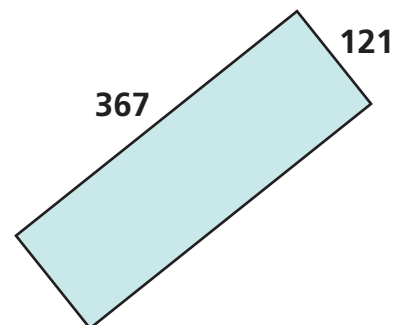
Perimeter: _____ units

7



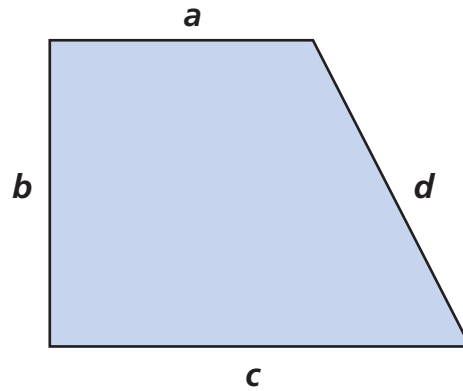
Perimeter: _____ units

8



Perimeter: _____ units

Solve the problems.



9 Why can't you use a formula for finding the perimeter of a parallelogram to find the perimeter of the figure above?



10 How can you find the perimeter?

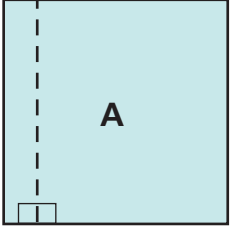


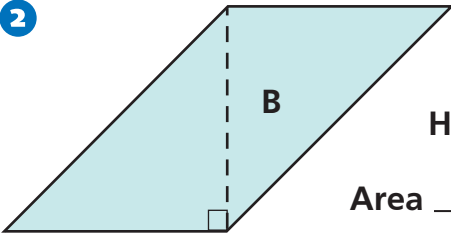
11 **Challenge** Does the formula for finding the perimeter of a rectangle work for finding the perimeter of a square? Tell how you know. _____

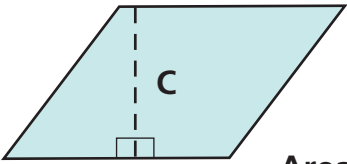
Area of Parallelograms

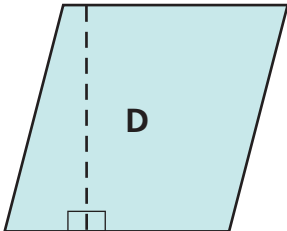
NCTM Standards 1, 3, 4, 7, 9

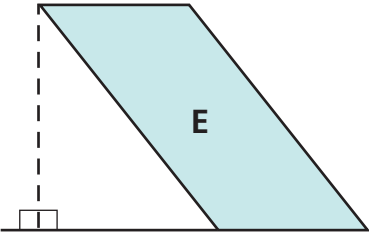
Record the area of each parallelogram (A–F) in square centimeters (sq cm).

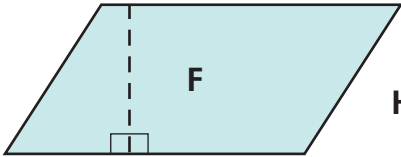
1  Base 3 cm
Height 3 cm
Area _____

2  Base 3 cm
Height 3 cm
Area _____


3  Base 3 cm
Height 2 cm
Area _____


4  Base 3 cm
Height 3 cm
Area _____

5  Base 2 cm
Height 3 cm
Area _____

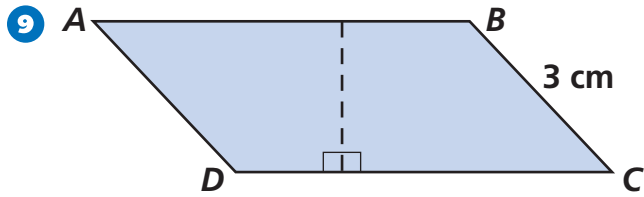
6  Base 4 cm
Height 2 cm
Area _____

Complete the sentences.

- 7  Parallelograms , , and look different but have the same area. Explain why.

- 8  Parallelograms and have different base and height measurements, but they have the same area. Explain why.

Use a centimeter ruler to find the area and perimeter of each parallelogram. Measure to the nearest cm. Record the area in sq cm and the perimeter in cm.

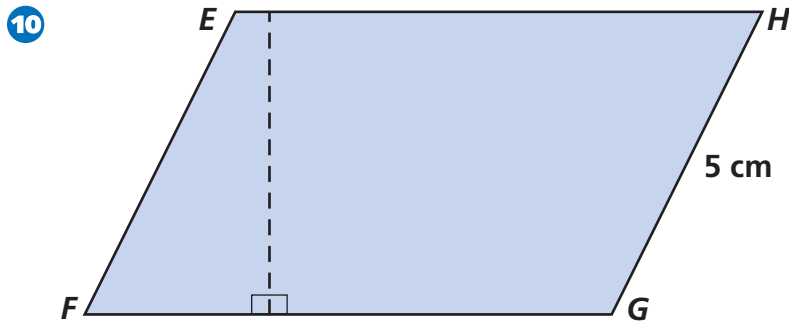


Base \overline{DC} _____

Height _____

Area _____

Perimeter _____

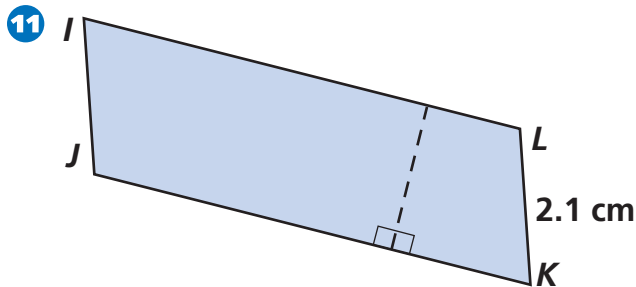


Base \overline{FG} _____

Height _____

Area _____

Perimeter _____



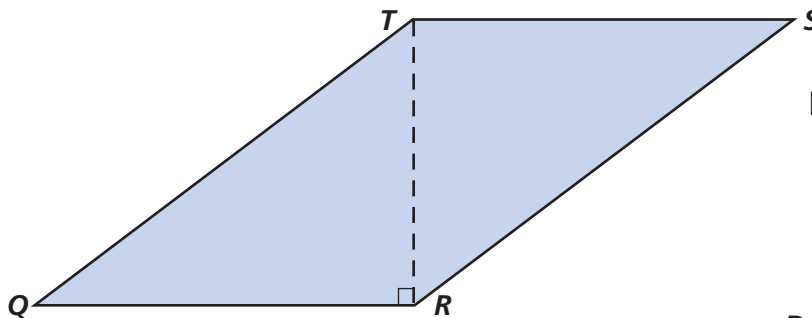
Base \overline{JK} _____

Height _____

Area _____

Perimeter _____

12 Challenge Use an inch ruler to find the area and perimeter of this parallelogram. Measure to the nearest $\frac{1}{2}$ inch. Record the area in sq. in. and the perimeter in inches (in.).



Base \overline{QR} _____

Height _____

Area _____

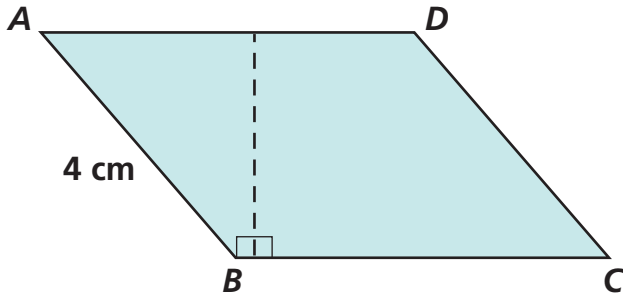
Perimeter _____

Measuring to Find Areas of Parallelograms

NCTM Standards 1, 3, 4, 6, 7, 9, 10

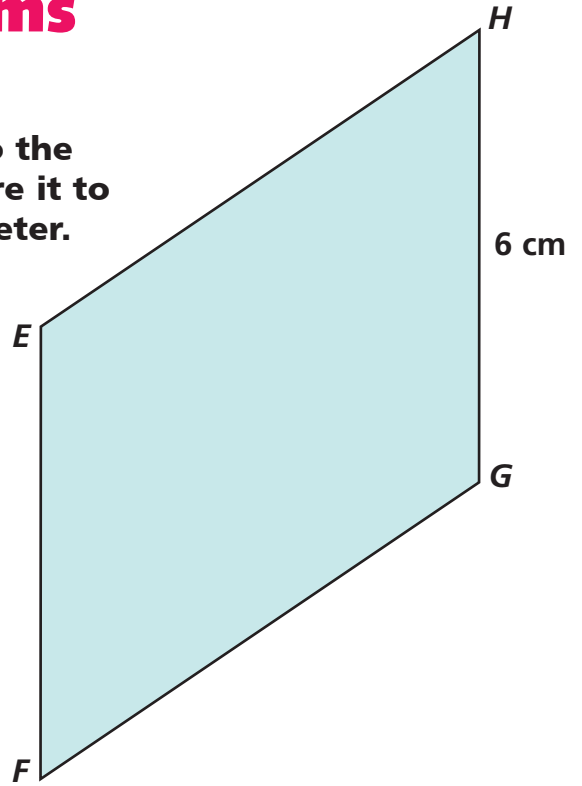
Measure the sides of each parallelogram to the nearest cm. Draw in the height and measure it to the nearest cm. Record the area and perimeter.

1



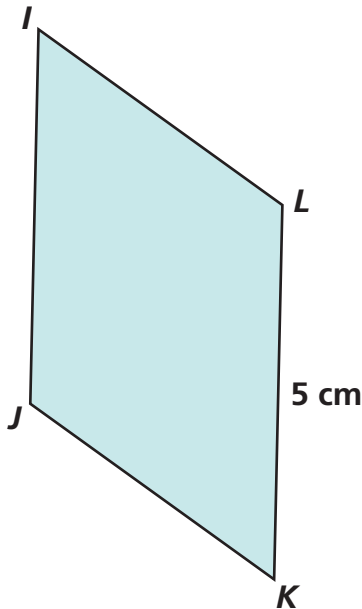
Base \overline{BC} _____ Area _____
 Height 3 cm Perimeter _____

2



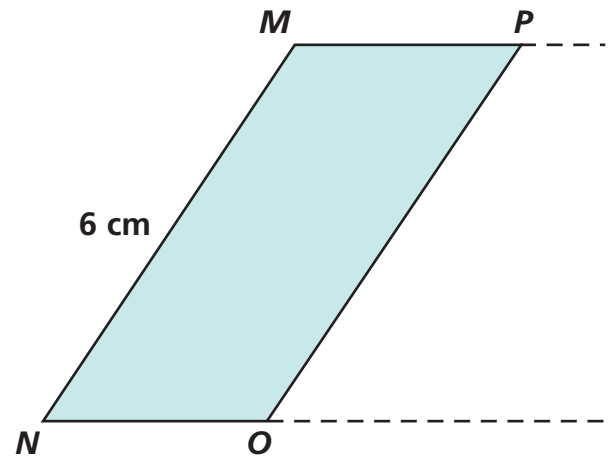
Base \overline{FG} _____ Area _____
 Height _____ Perimeter _____

3



Base \overline{JK} _____ Area _____
 Height _____ Perimeter _____

4



Base \overline{NO} _____ Area _____
 Height _____ Perimeter _____

Solve the problems.

5 The fence around a rectangular-shaped park is 240 yards long.

A Draw a rectangle to represent the park, and label the lengths of the sides.

B What is the area of a park with these measurements? _____

C Draw a different rectangle to represent the park.

D What is the area of a park with these measurements? _____

6 Challenge A quilt is made up of square patches, each of which measure 16 inches by 16 inches. Each patch is made up of 16 small squares. What is the area of each small square? _____

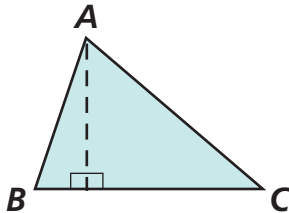
Draw a sketch if you wish.

Area of Triangles and Trapezoids

NCTM Standards 1, 3, 4, 6, 7, 9

Find the area and perimeter of each triangle.
The given measures are approximate.

1

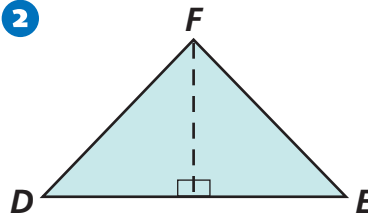


Base \overline{BC} 3 cm
Height 2 cm
Side \overline{AB} 2.1 cm
Side \overline{AC} 3 cm

Area _____

Perimeter _____

2

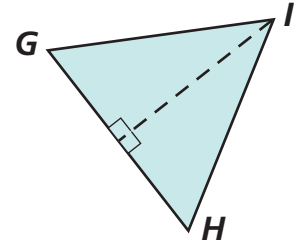


Base \overline{DE} 4 cm
Height 2 cm
Side \overline{FD} 3 cm
Side \overline{FE} 3 cm

Area _____

Perimeter _____

3

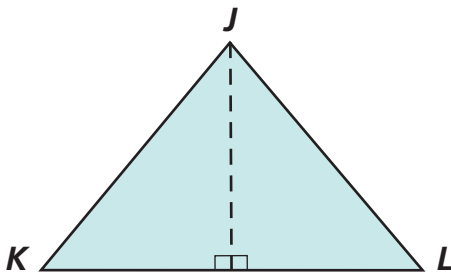


Base \overline{GH} 3 cm
Height 2 cm
Side \overline{GI} 3 cm
Side \overline{IH} 3 cm

Area _____

Perimeter _____

4



Base \overline{KL} 5 cm
Height 3 cm

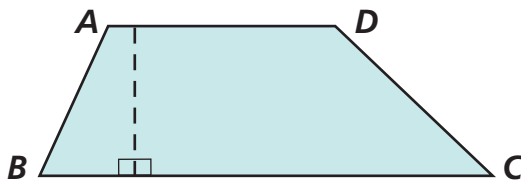
Side \overline{JK} 4 cm
Side \overline{LJ} 4 cm

Area _____

Perimeter _____

Find the area and perimeter of each trapezoid.
The given measures are approximate.

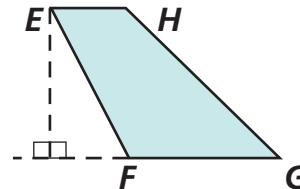
5



Base \overline{AD} 3 cm Side \overline{DC} 3 cm
Base \overline{BC} 6 cm Side \overline{AB} 2.3 cm
Height 2 cm

Area _____ Perimeter _____

6

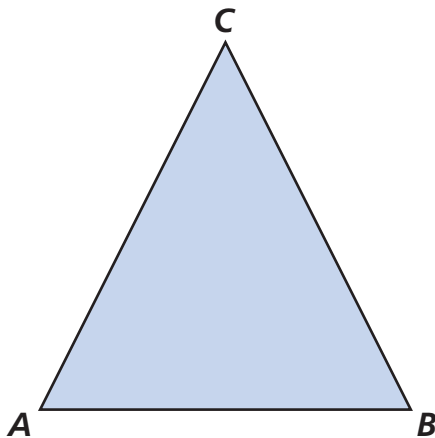


Base \overline{EH} 1 cm Side \overline{EF} 2.2 cm
Base \overline{FG} 2 cm Side \overline{GH} 3 cm
Height 2 cm

Area _____ Perimeter _____

Measure the dimensions and then find the area of each figure in square inches. Draw in the height. Measure to the nearest half inch.

7

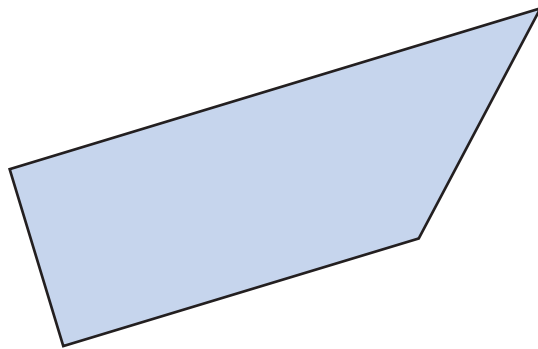


Base \overline{AB} _____

Height _____

Area _____

8



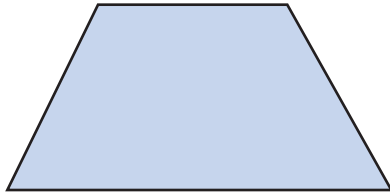
Base _____

Base _____

Height **1 in.** _____

Area _____

9



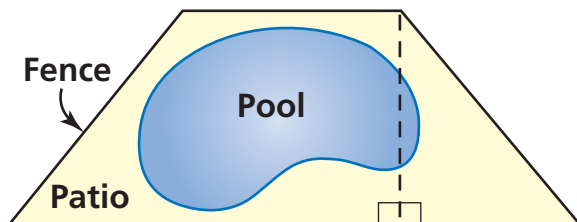
Base _____

Base _____

Height _____

Area _____

10 Challenge Use this diagram and scale to help you answer the questions. Measure to the nearest centimeter.



1 cm = 12 feet = _____ yards

A Approximately how many yards of fencing surround the pool and patio?

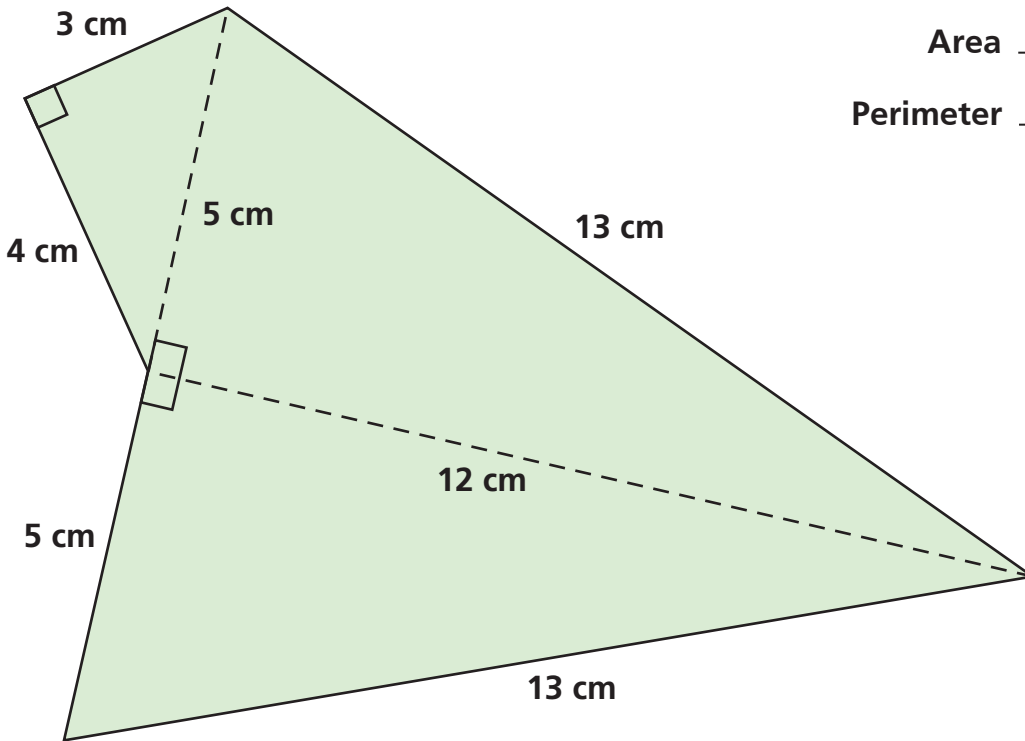
B How many square yards make up the approximate area inside the fence?

Area and Perimeter of Other Polygons

NCTM Standards 1, 3, 7, 9

Use the measurements given to find the area and perimeter.

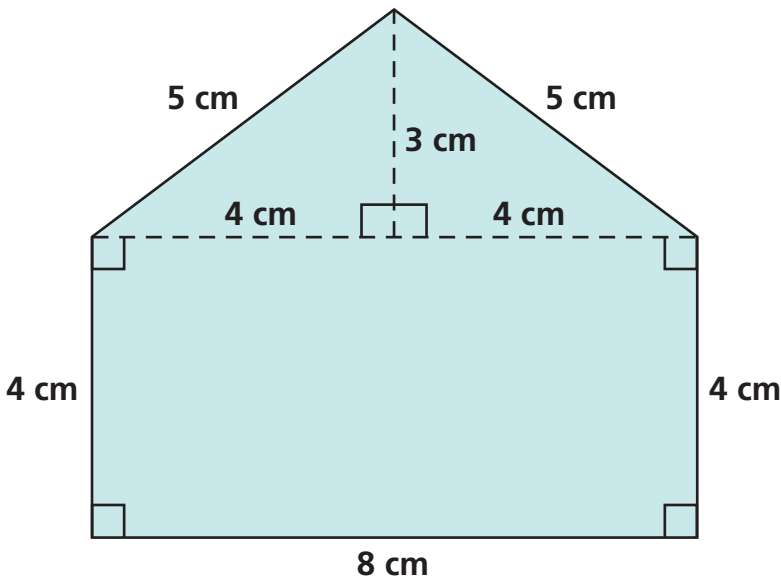
1



Area _____

Perimeter _____

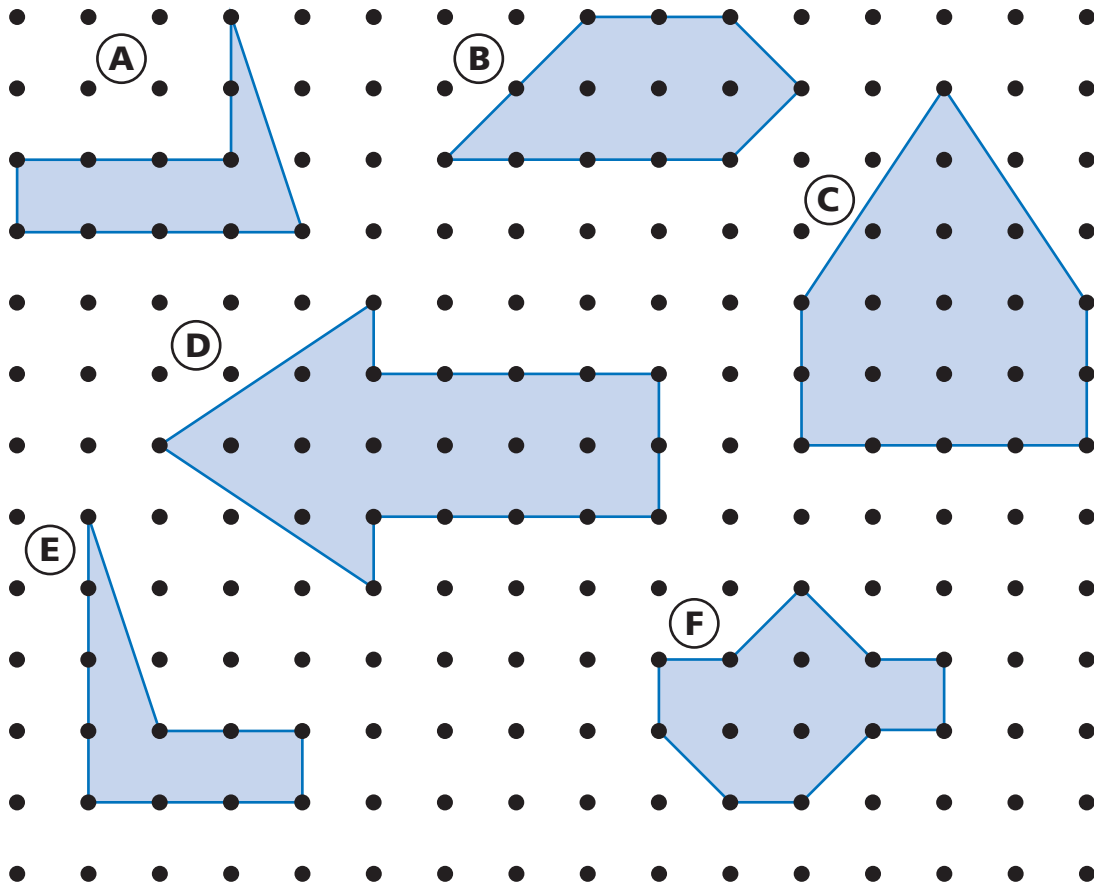
2



Area _____

Perimeter _____

3 Find pairs of polygons that have the same area.



Same area:

--	--

Same area:

--	--

Same area:

--	--



4 **Challenge** Pick 2 figures above that have the same area but look like they have different perimeters. Without measuring, decide which one has a greater perimeter.

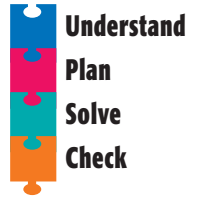
Figure has a greater perimeter than figure .

Why do you think so? _____

Problem Solving Strategy

Solve a Simpler Problem

NCTM Standards 1, 3, 4, 6, 7, 8, 9



Solve each problem.

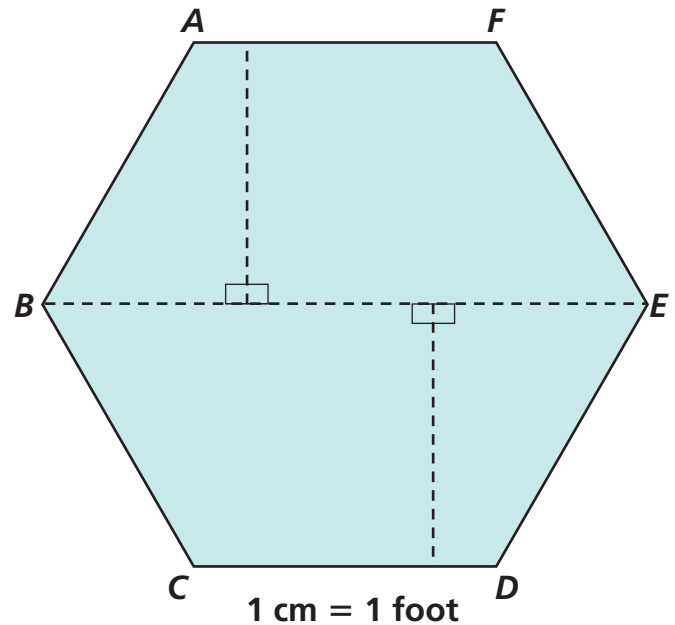
- 1 Here is a sketch of a cover for a hexagonal swimming pool. \overline{AF} , \overline{BE} , and \overline{CD} are parallel.

Use measurements to the nearest cm and use the scale to find the area of the cover.

Area _____

Find the perimeter of the outside edge of the pool.

Perimeter _____



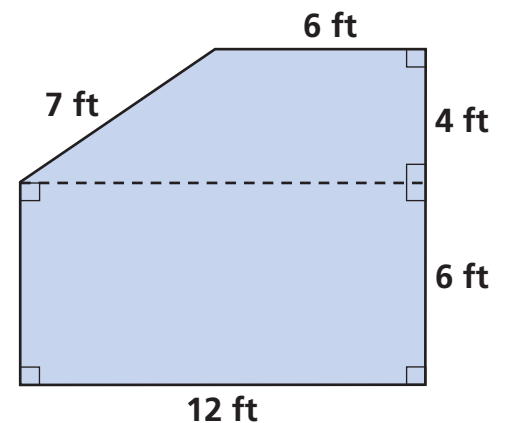
- 2 Mr. Reynolds needed to order carpeting for a room. He made approximate measurements and drew this sketch to show the information he had.

Find the area of the rug.

Area _____

Find the perimeter of the edge of the rug.

Perimeter _____



Problem Solving Test Prep

Choose the correct answer.

1 What is the rule for the table?

Input	Output
4	14
2	8
6	20
9	29
7	23

- A. $x + 10$ C. $2x + 6$
 B. $4x - 2$ D. $3x + 2$

2 Which is the only number of juice boxes that can be packed in cartons of 2, 3, 5, 6, or 9 with no boxes left over?

- A. 800 C. 1,100
 B. 900 D. 1,400

3 Which number is NOT between the two given ones when the numbers are written in order?

999,809 and 1,001,034

- A. 1,001,019 C. 999,900
 B. 1,001,101 D. 999,810

4 Which is NOT a correct name for all the figures?

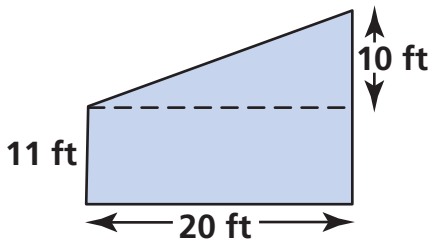


- A. polygons
 B. quadrilaterals
 C. parallelograms
 D. simple closed figures

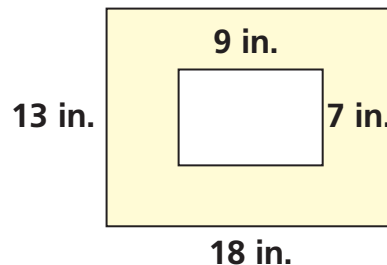
Show What You Know

Solve each problem. Explain your answer.

5 What is the area of the figure?



6 What is the area of the shaded frame around the picture?

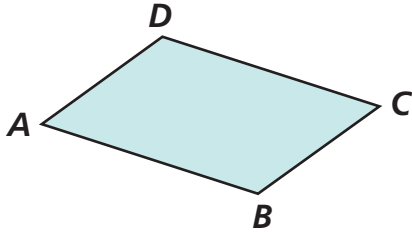


Review/Assessment

NCTM Standards 1, 3, 4, 6, 7, 9, 10

Measure the sides of each figure to the nearest centimeter. Record the perimeter in cm. Draw in a height. **Lesson 1**

1

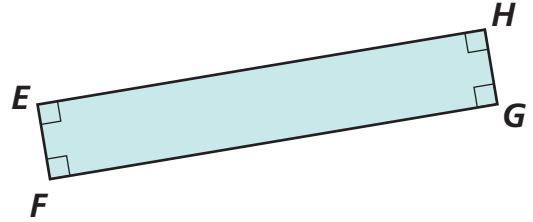


\overline{AB} _____ \overline{DC} _____

\overline{BC} _____ \overline{DA} _____

Perimeter _____

2



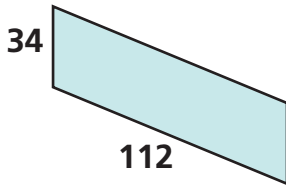
\overline{EF} _____ \overline{GH} _____

\overline{FG} _____ \overline{HE} _____

Perimeter _____

Find the perimeter of each parallelogram. **Lesson 2**

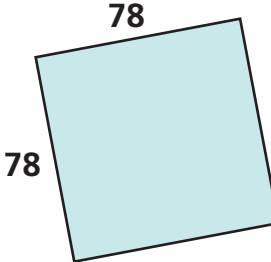
3



Perimeter

_____ units

4

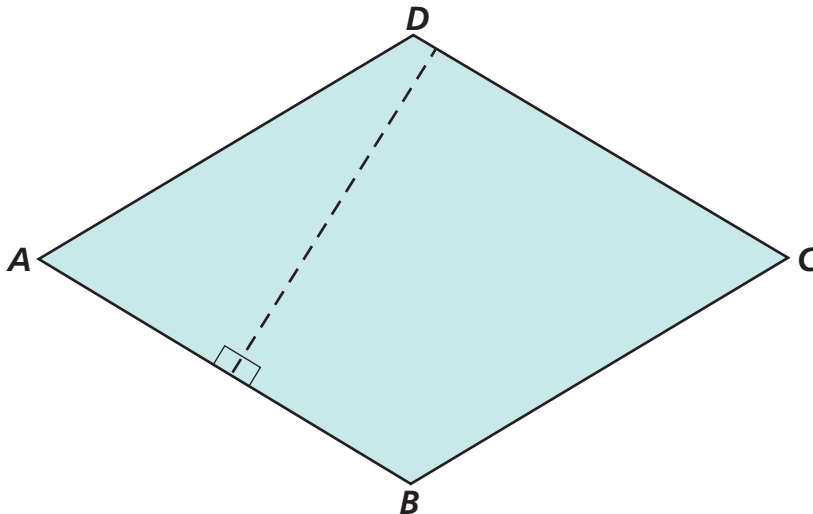


Perimeter

_____ units

5

Measure the sides and height of the parallelogram to the nearest cm. Record the area and perimeter. **Lessons 3 and 4**



Base \overline{AB} _____

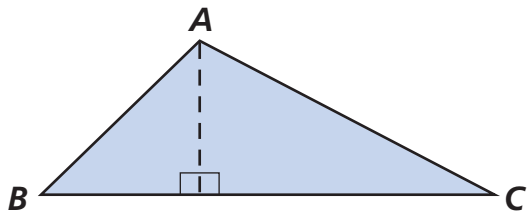
Height _____

Area _____

Perimeter _____

Use the approximate measures to find the area and perimeter of each polygon. [Lesson 5](#)

6



Base \overline{BC} : 6 cm

Height: 2 cm

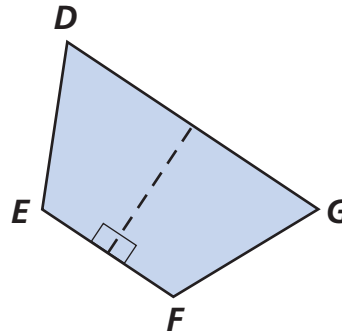
Side \overline{AB} : 3 cm

Side \overline{AC} : 4 cm

Area _____

Perimeter _____

7



Base \overline{EF} : 2 cm

Base \overline{DG} : 4 cm

Height: 2 cm

Side \overline{DE} : 2.5 cm

Side \overline{FG} : 2.5 cm

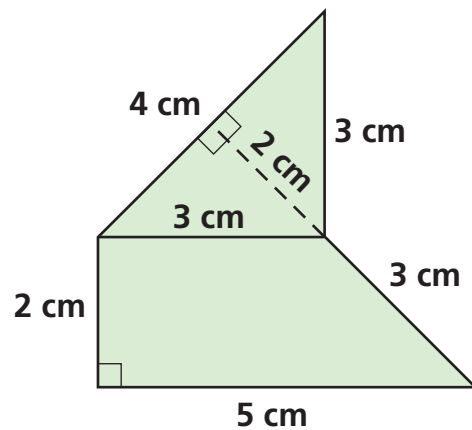
Area _____

Perimeter _____

8 Use the measurements given to find the area and perimeter. [Lesson 6](#)

Area _____

Perimeter _____



9 Mason needs to calculate the number of square feet of siding needed to cover the back side of his storage shed. He knows that some of the sides are perpendicular and that the line segments \overline{AF} , \overline{BE} , and \overline{CD} in the sketch are parallel. [Lesson 7](#)

Use a cm ruler, the sketch, and the scale to find the area.

1 cm = 3 ft

Area _____

