Understanding Perimeter
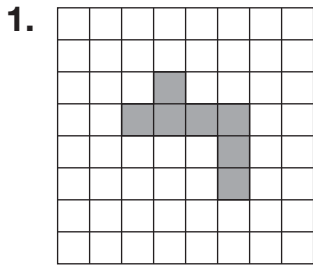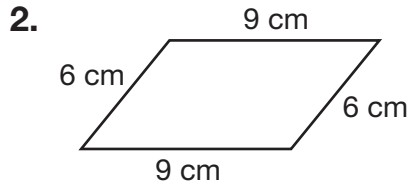
Find the perimeter of each polygon.

1.

2.

9 cm
6 cm
6 cm
9 cm

3.

14 cm
5 cm
7 cm
6 cm
10 cm
5 cm

_____   _____   _____
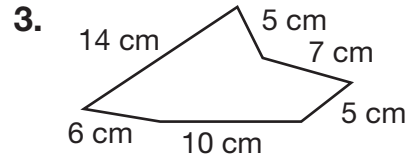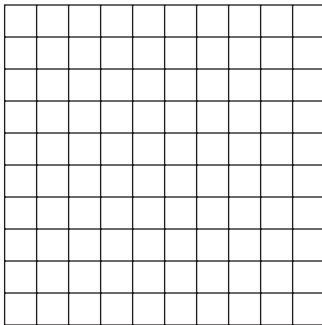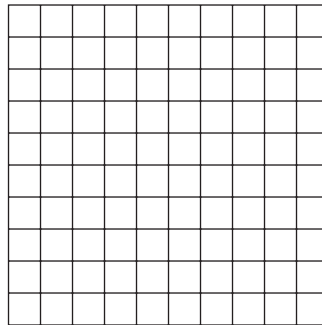
Draw a figure with the given perimeter.

4. 10 units

5. 22 units

6. A park has the shape of a trapezoid. Two of the sides are 25 meters long. The other two sides are 40 meters and 20 meters long. What is the perimeter of the park?

_____

7. Mr. Anders wants to put a fence around his backyard. His backyard is rectangular. The lengths of the sides are 75 yards, 45 yards, 75 yards, and 45 yards. How much fencing will Mr. Anders need?

_____

8. Communicate When finding the perimeter of a figure on a grid, why do you not count the spaces inside the grid?

_____

_____

9. Which rectangle has a perimeter of 16 units?

A Length 5 units, width 3 units

B Length 10 units, width 6 units

C Length 8 units, width 1 unit

D Length 6 units, width 3 units

Tools and Units for Perimeter

In **1** and **2**, circle the better tool for measuring the perimeter of each.

1. A round clock

Yardstick   Measuring tape

2. A square classroom

Ruler   Yardstick

In **3** and **4**, circle the best unit for measuring the perimeter of each.

3. A parking lot

Yards   Inches   Miles

4. The top of your desk

Yards   Miles   Inches

In **5** and **6**, choose the best tool and unit from the list.

5. Mrs. Lenz wants to put ribbon around the edge of a pillow. Which tool and unit should she use to measure the perimeter of the pillow?

_____

6. Mr. Paz wants to put a fence around a baseball field. Which tool and unit should he use to measure the perimeter of the baseball field?

_____

Tools
Measuring tape
Ruler
Yardstick

Units
Miles
Yards
Feet
Inches

7. Which tool and unit is the best choice for measuring the perimeter of a picture on the wall?

A Ruler and inches

B Yardstick and feet

C Yardstick and yards

D Measuring tape and yards

8. Which of these units could NOT be used to measure the perimeter of a gymnasium?

A Feet

B Inches

C Miles

D Yards

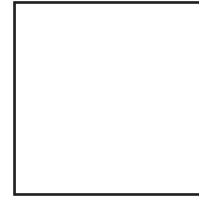**9.** How are a ruler, a yardstick, and a measuring tape the same? How are they different?

_____

_____

Perimeter of Common Shapes

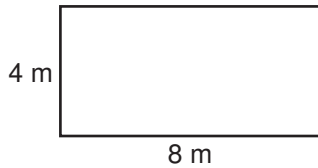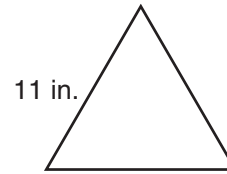Use an inch ruler to measure the length of the sides of each polygon. Find the perimeter.

1.

_____

2.

_____

Find the perimeter of each shape.

3.

4 m
8 m

_____

4.

11 in.

_____

5. The largest room in Lauren's house is shaped like a square with sides of 6 yards. What is the perimeter of that room?

_____

6. The basketball court at Johnson Elementary School is in the shape of a rectangle. It is 92 feet long and 46 feet wide. What is the perimeter of the basketball court?

_____

7. A square has 9-inch sides. Every side of a pentagon is also 9 inches long. Are their perimeters the same? Explain your answer.

_____

_____

8. What is the perimeter of a hexagon that has equal sides of 12 inches?

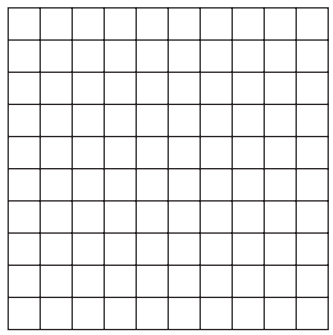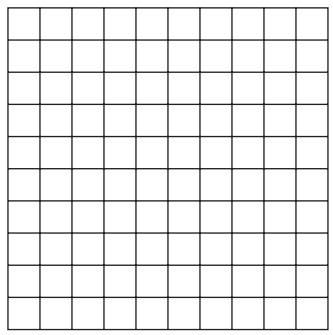**A** 60 inches   **B** 66 inches   **C** 72 inches   **D** 84 inches

Different Shapes with the Same Perimeter
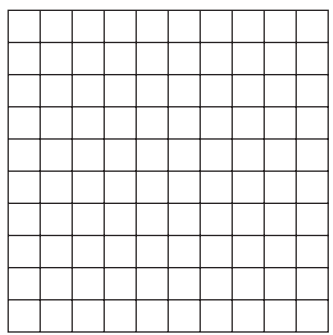
Draw a figure with the given perimeter on the grid paper.

1. 10 units
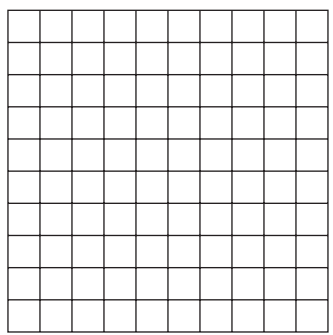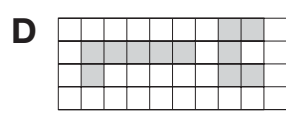
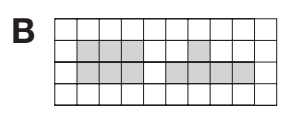**2.** 16 units

3. 14 units
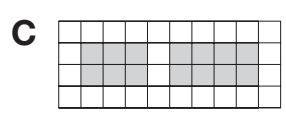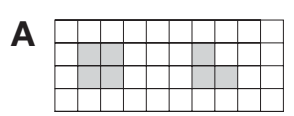
4. 18 units

5. **Writing to Explain** Can you draw a square with a perimeter of 20 units? Explain why or why not.
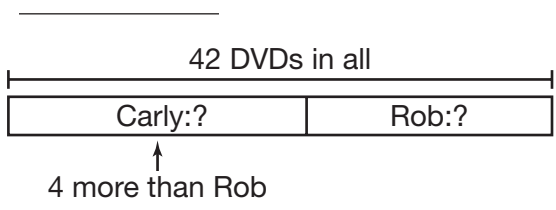
_____

_____

_____

6. Name the lengths of the sides of three rectangles with perimeters of 12 units. Use only whole numbers.

_____

_____

_____

**7.** Which figures have the same perimeter?

A

C

B

D

Problem Solving: Try, Check, and Revise

1. Carly and Rob combined their DVD collections. Now they have 42 DVDs all together. Carly had 4 more DVDs than Rob. How many DVDs did Carly have?

_____

| 42 DVDs in all	
Carly:?	Rob:?

↑
4 more than Rob

2. There are 33 students in the band. There are 6 more 5th-grade students than 3rd-grade students. There is an equal number of 3rd-grade and 4th-grade students. How many 3rd-grade students are in the band?

_____

33 students in all		
3rd:?	4th:?	5th:?

↑ Same as Grade 4   ↑ Same as Grade 3   ↑ 6 more than Grade 3
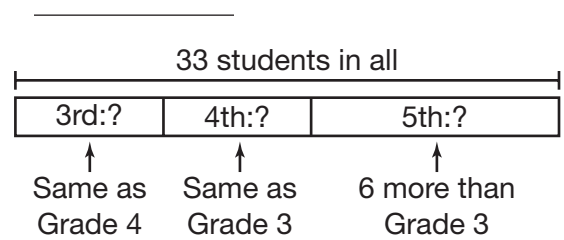
3. Dave delivered 52 newspapers in all on Saturday and Sunday. He delivered 8 more newspapers on Sunday than on Saturday. How many newspapers did Dave deliver on Sunday? Explain how you solved.

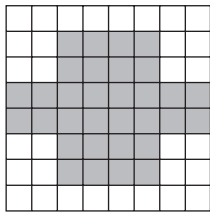| 52 newspapers in all	
Saturday:?	Sunday:?

↑
8 more than Saturday

_____

_____

_____
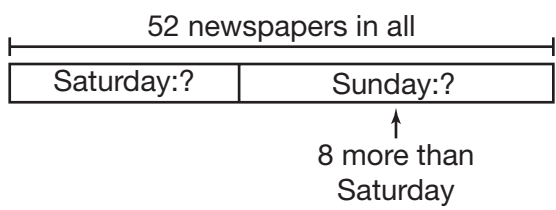
4. There are 24 students in Ms. Messing's class. Six more students walk to school than ride their bikes. The number of students who ride their bikes is the same as the number of students who are driven to school. How many students walk to school?

_____

24 students in all		
Driven:?	Bike:?	Walk:?

↑ Same as Bike   ↑ Same as Driven   ↑ 6 more than Bike
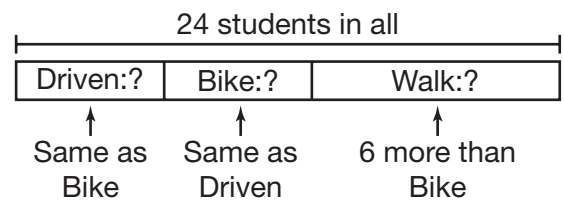
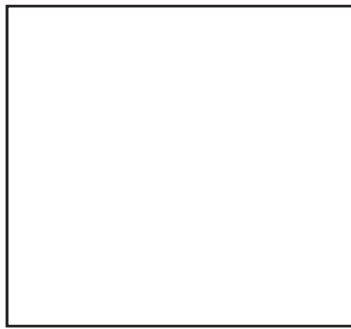5. Jill is thinking of two numbers. They have a sum of 27 and a difference of 7. What are the two numbers?

A 27 and 7   B 20 and 7   C 15 and 12   D 17 and 10

1. Marci makes a design with tiles on a tabletop shown in the diagram. What is the perimeter of the design? (13-1)

scale: ⊢ = 1 inch

A 64 inches

B 36 inches

C 32 inches

D 28 inches

2. Meg's bedroom is in the shape of a square. She draws this diagram. What is the perimeter of Meg's bedroom? (13-3)
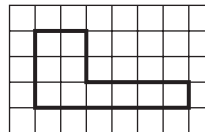
10 ft

A 200 feet

B 100 feet

C 40 feet

D 20 feet

3. Each of the 22 students in Ella's class chose either blue or green crayons to use during art class. If 6 more students chose blue crayons than green crayons, how many chose each? (13-5)

A 16 chose blue, 6 chose green

B 15 chose blue, 7 chose green

C 14 chose blue, 8 chose green

D 13 chose blue, 9 chose green

4. Dorine's tile design is shown below.

Which other design has the same perimeter as Dorine's tile design? (13-4)

A

B

C

D

5. Luanne has a small jewelry box like the one shown below. She wants to cover the bottom with felt. She needs to measure the perimeter of the bottom to cut the right size piece of felt. Which tool and unit of measure would be her best choice? (13-2)

(A) Ruler and inches

B Tape measure and feet

C Yardstick and feet

D Yardstick and yards

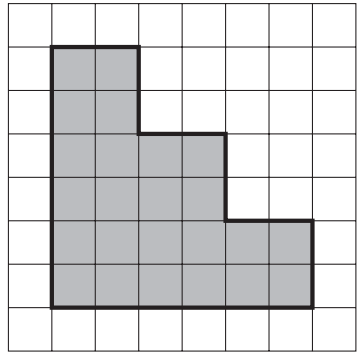**6.** A drawing of Brian's patio is shown. What is the perimeter of the patio? (13-1)

Scale: ├────┤ = 1 yard

24 yards.

7. Joe's vegetable garden is in the shape of a rectangle. What is the perimeter of the vegetable garden? (13-3)

8 ft

10 ft

36 feet.

8. Mrs. Brown's art class is on a field trip. Of the 431 students, there are 7 more boys than girls. How many boys are there? How many girls are there? (13-5)
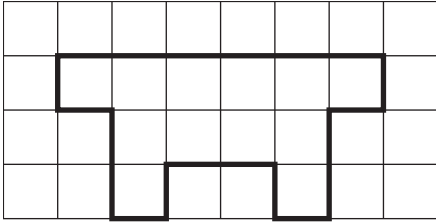
219 boys; 212 girls.

9. Allison wants to put a green cord around the picture frame shown below. She needs to find how much cord to buy.

What measurement tool and unit would be a good choice? (13-2)

Tape measure and inches.

10. Patrick's tile design is shown below.

Draw another tile design that has the same perimeter as the design shown. (13-4)

Check students' drawings.

11. Mr. Levine wants to put edging around his garden, which is shaped like a rectangle. He needs to measure the perimeter to make sure he buys enough edging. What tool should he use? What unit would be best? Explain. (13-2)

Sample answer: Tape measure or yardstick; Feet or yards; A garden is large, so feet or yards would be better than inches.

12. Use grid paper to draw a square with a perimeter of 20 units. Then draw a rectangle with a perimeter of 20 units. (13-4)

Check students' drawings.

13. A drawing of a park in town is shown below. There is a fence around the perimeter of the park. What is the perimeter of the park? (13-1)

89 yd

25 yd

18 yd

16 yd

12 yd

3 yd   3 yd

6 yd   6 yd

1. Marci makes a design with tiles on a tabletop shown in the diagram. What is the perimeter of the design? (13-1)
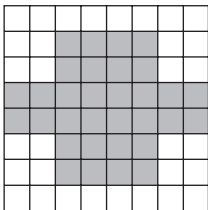
scale: ⊢ = 1 inch

A 64 inches

B 36 inches

C 32 inches

D 28 inches

2. Meg's bedroom is in the shape of a square. She draws this diagram. What is the perimeter of Meg's bedroom? (13-3)
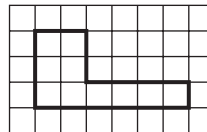
10 ft

A 200 feet

B 100 feet

C 40 feet

D 20 feet

3. Each of the 22 students in Ella's class chose either blue or green crayons to use during art class. If 6 more students chose blue crayons than green crayons, how many chose each? (13-5)

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C 14 chose blue, 8 chose green

D 13 chose blue, 9 chose green

4. Dorine's tile design is shown below.

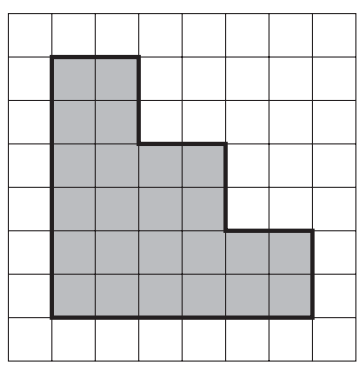Which other design has the same perimeter as Dorine's tile design? (13-4)

A

B

C

D

Name _____

5. Luanne has a small jewelry box like the one shown below. She wants to cover the bottom with felt. She needs to measure the perimeter of the bottom to cut the right size piece of felt. Which tool and unit of measure would be her best choice? (13-2)

   A Ruler and inches

   B Tape measure and feet

   C Yardstick and feet

   D Yardstick and yards

6. A drawing of Brian's patio is shown. What is the perimeter of the patio? (13-1)

   Scale: ⊢——⊣ = 1 yard

7. Joe's vegetable garden is in the shape of a rectangle. What is the perimeter of the vegetable garden? (13-3)
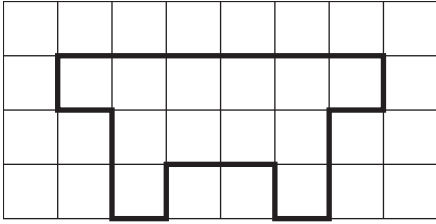

   10 ft

   8 ft

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9. Allison wants to put a green cord around the picture frame shown below. She needs to find how much cord to buy.

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Draw another tile design that has the same perimeter as the design shown. (13-4)

11. Mr. Levine wants to put edging around his garden, which is shaped like a rectangle. He needs to measure the perimeter to make sure he buys enough edging. What tool should he use? What unit would be best? Explain. (13-2)

_____

_____

_____

_____

_____

_____

_____

12. Use grid paper to draw a square with a perimeter of 20 units. Then draw a rectangle with a perimeter of 20 units. (13-4)

13. A drawing of a park in town is shown below. There is a fence around the perimeter of the park. What is the perimeter of the park? (13-1)

25 yd

18 yd

16 yd

12 yd

3 yd   3 yd

6 yd   6 yd