

**Student Activity Book**

**Area and Perimeter Practice**

**Questions 1–11 (SAB pp. 22–34)**

I. Number sentences may vary. One possible number sentence is given for each.

A. Area: 36 square centimeters

Perimeter: 30 centimeters

$$3 + 12 + 3 + 12 = 30 \text{ centimeters}$$

B. Area: 34 square centimeters

Perimeter: 30 centimeters

$$2 + 2 + 2 + 2 + 2 + 1 + 2 + 4 + 4 + 9 = 30 \text{ centimeters}$$

C. Area: 14 square centimeters

Perimeter: 30 centimeters

$$1 + 14 + 1 + 14 = 30 \text{ centimeters}$$

D. Area: 54 square centimeters

Perimeter: 30 centimeters

$$6 + 9 + 6 + 9 = 30 \text{ centimeters}$$

E. Area: 14 square centimeters

Perimeter: 16 centimeters

$$4 + 3 + 5 + 2 + 1 + 1 = 16 \text{ centimeters}$$

F. Area: 20 square centimeters

Perimeter: 42 centimeters

$$20 + 20 + 2 = 42 \text{ centimeters}$$

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
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### Area and Perimeter Practice


**Finding Area and Perimeter**

1. Find the area and perimeter of each shape. Write a number sentence to show how you found each perimeter.

The grid squares in these shapes have an area of 1 square centimeter.

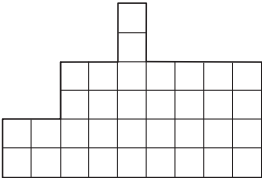


**\*\*A.**




Area: \_\_\_\_\_ Perimeter: \_\_\_\_\_

**\*\*B.**



Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_

**\*\*C.**



Area: \_\_\_\_\_ Perimeter: \_\_\_\_\_

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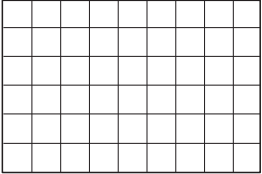
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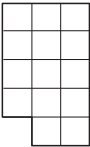
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**\*\*D.**



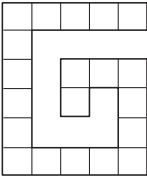
Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_

**\*\*E.**



Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_

**\*\*F.**



Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_

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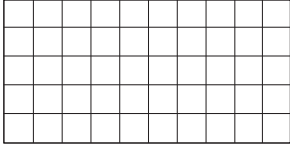
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- G. Area: 50 square centimeters  
Perimeter: 30 centimeters  
 $10 + 10 + 5 + 5 = 30$  centimeters
- H. Area:  $25 \times 10 = 250$  square centimeters  
Perimeter: 70 centimeters  
 $25 + 25 + 10 + 10 = 70$  centimeters
- 2. A. Answers will vary. Possible responses: The shapes are all made of square centimeters; they all have the same perimeter.
- B. Possible responses: The shapes all have a different shape; three are rectangles, one is not; they all have different areas.
- 3. Answers will vary. Students should draw two shapes with perimeters of 30 cm and find their areas in sq. cm.

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■G. 

Area: \_\_\_\_\_ Perimeter: \_\_\_\_\_

■H. A Large rectangle is 25 cm long and 10 cm wide.

Area: \_\_\_\_\_ Perimeter: \_\_\_\_\_

★●2. Compare the shapes in Question 1A–D.

A. How are the shapes the same? \_\_\_\_\_  
\_\_\_\_\_

B. How are the shapes different? \_\_\_\_\_  
\_\_\_\_\_

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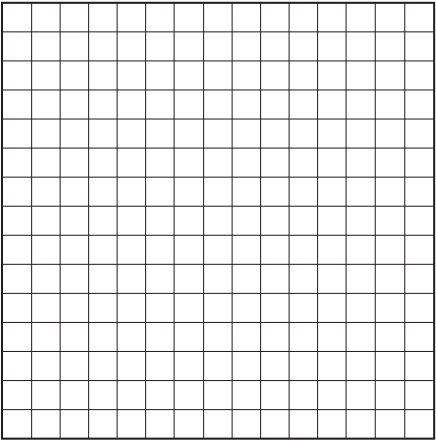
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✓ Check-In: Question 3

★●●3. Draw two more shapes that have a perimeter of 30 cm in the square-centimeter grid below. Find the area of each shape.



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**Reasoning About Area and Perimeter**

★●4. Use square-inch tiles to make a shape that fits on the grid and matches the clues in each riddle. Put the tiles together edge to edge. Draw the shape on the grid. Compare your shape to the clues.

edge to edge

not edge to edge

**A.** Clue 1: My area is 12 sq. in.  
Clue 2: My perimeter is 18 in.  
Clue 3: I am not a rectangle.

**B.** Clue 1: My area is 12 sq. in.  
Clue 2: I am a rectangle.  
Clue 3: My perimeter is 14 in.

Area: \_\_\_\_\_ Perimeter: \_\_\_\_\_

Area: \_\_\_\_\_ Perimeter: \_\_\_\_\_

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**C.** Clue 1: I am a rectangle.  
Clue 2: My area is 12 sq. in.  
Clue 3: My perimeter is 16 in.

**D.** Clue 1: I am not a rectangle.  
Clue 2: My area is 12 sq. in.  
Clue 3: My perimeter is 16 in.

Area: \_\_\_\_\_ Perimeter: \_\_\_\_\_

Area: \_\_\_\_\_ Perimeter: \_\_\_\_\_

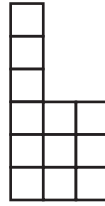
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4. Shapes may vary for Parts A–D. One possible shape is shown for each riddle.

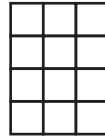
**A.**



Area: 12 square inches

Perimeter: 18 inches

**B.**



Area: 12 square inches

Perimeter: 14 inches

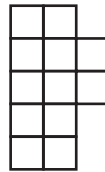
**C.**



Area: 12 square inches

Perimeter: 16 inches

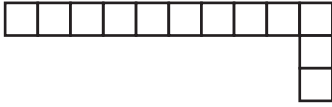
**D.**



Area: 12 square inches

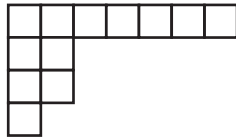
Perimeter: 16 inches

5. Riddles and answers will vary. Possible shapes include:



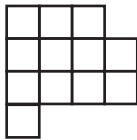
Area: 12 square inches

Perimeter: 26 inches



Area: 12 square inches

Perimeter: 22 inches



Area: 12 square inches

Perimeter: 16 inches

6. A. Area: 6 square inches

Perimeter: 12 inches

B. Answers will vary.

C. Answers will vary. The areas of all the shapes are the same.

D. The perimeters of all the shapes are different.

7. Explanations will vary. Students may say that two rectangles with the same area can have different perimeters, so both Jackie's and Roberto's rectangles can be correct.

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

C. How are the three shapes from Parts A and B the same?

D. How are the three shapes different?

••7. Jackie made a rectangle with 8 tiles. "My rectangle has a perimeter of 18 inches," said Jackie.

"That can't be right!" said Roberto. "I made a shape with 8 tiles too, but my perimeter is only 12 inches."

What would you say to Roberto?

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

•5. • Make a riddle by filling in a number in Clue 3.  
• Check to make sure there is a shape that matches all the clues for your riddle.  
• Trade riddles with a partner.  
• Solve your partner's riddle and draw the matching shape on your partner's paper.

Clue 1: I am not a rectangle.  
Clue 2: My area is 12 square inches.  
Clue 3: My perimeter is \_\_\_\_\_ inches.

Area: \_\_\_\_\_ Perimeter: \_\_\_\_\_

Solved by: \_\_\_\_\_

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✓ Check-In: Questions 6-7

••6. Grace used six square-inch tiles to make the shape shown below. Find the area and perimeter of the shape.

A. Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_

B. In the grid below, draw two more shapes with the same area as Grace's shape—one with a *larger* perimeter and one with a *smaller* perimeter. Write the area and perimeter next to each shape.

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

●8. Using five square-inch tiles, how many shapes can you find that each have different perimeters? Sketch each shape below. Write the area and perimeter next to each shape you draw.

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●9. Roberto has 24 square-centimeter tiles. He started to make a table to find the rectangle with the smallest perimeter. Complete Roberto's table. Draw a sketch of the rectangle with the smallest perimeter.

Length cm	Width cm	Perimeter cm
24	1	50
12	2	28
8	3	
6	4	
4	6	
3	8	
2	12	
1	24	

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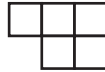
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8. Shapes may vary, but only two different perimeters are possible:



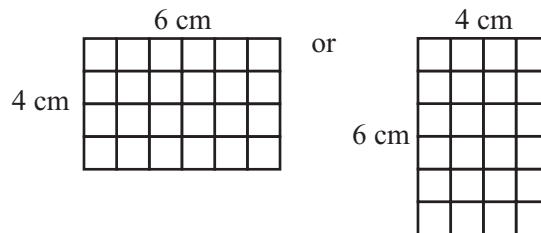
Area: 5 square inches  
Perimeter: 12 inches



Area: 5 square inches  
Perimeter: 10 inches

9.

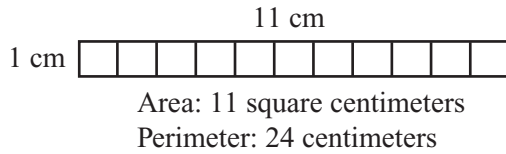
Length cm	Width cm	Perimeter cm
24	1	50
12	2	28
8	3	22
6	4	20
4	6	20
3	8	22
2	12	28
1	24	50



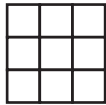
Area: 24 square centimeters  
Perimeter: 20 centimeters

10.

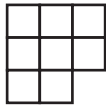
Length cm	Width cm	Perimeter cm	Area sq cm
6	6	24	36
5	7	24	35
4	8	24	32
3	9	24	27
2	10	24	20
1	11	24	11



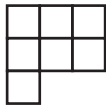
11. Shapes may vary, but only five different areas are possible:



Area: 9 square inches  
Perimeter: 12 inches



Area: 8 square inches  
Perimeter: 12 inches



Area: 7 square inches  
Perimeter: 12 inches



Area: 6 square inches  
Perimeter: 12 inches



Area: 5 square inches  
Perimeter: 12 inches

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

10. Kenya has a 24-centimeter piece of wire. She needs to bend it to make different rectangles. She started a table to find the rectangle with the smallest area. Complete Kenya's table. Draw a sketch of the rectangle with the smallest area.

Length cm	Width cm	Perimeter cm	Area cm
6	6	24	36
5	7	24	35
4	8		
3	9		
2			
1			

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11. How many different shapes can you find that have a perimeter of 12 inches, but each has a different area? Sketch each shape below. Write the area and perimeter next to each shape you draw.

**Area and Perimeter Practice  
Check-In: Q# 3, 6-7  
Feedback Box**

	Expectation	Check In	Comments
Recognize and generalize geometric relationships in problems involving the area and perimeter of rectangles. [Q# 6 and 7]	E4		
Find the perimeter of rectangles and irregular shapes by counting units and adding. [Q# 3 and 6]	E6		
Find the area of rectangles and irregular shapes by counting, adding, or multiplying. [Q# 6]	E7		

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