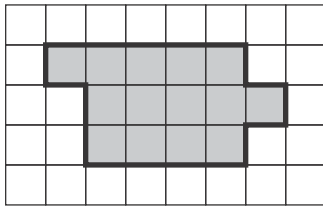


Name \_\_\_\_\_

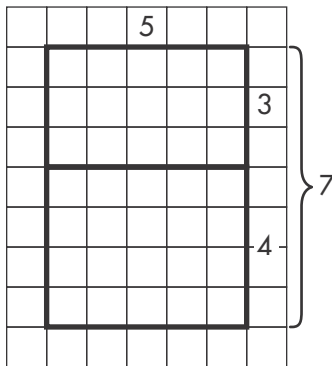
1. Count to find the area of the shape. Tell if the area is exact or an estimate. **2 points**



= 1 unit square

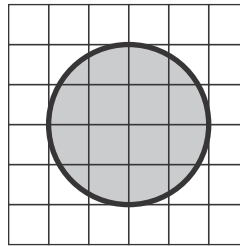
**14 square units; Exact**

2. Use the Distributive Property to write the equation that represents the picture. Then give the area of each smaller rectangle and the large rectangle. **2 points**



**$5 \times 7 = 5 \times (3 + 4) = (5 \times 3) + (5 \times 4)$**   
**Top rectangle: 15 square units; Bottom rectangle: 20 square units; Large rectangle: 35 square units**

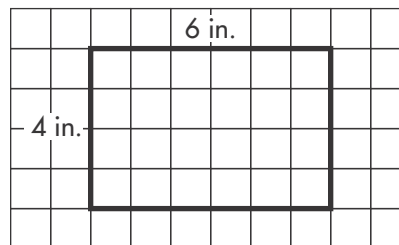
3. Kaitlin says that the figure below has an area of 6 square yards. Is she correct? Explain. **2 points**



= 1 square foot

**No; Sample answer: There are gaps if Kaitlin uses only 6 squares. Also, the units are square feet, not square yards.**

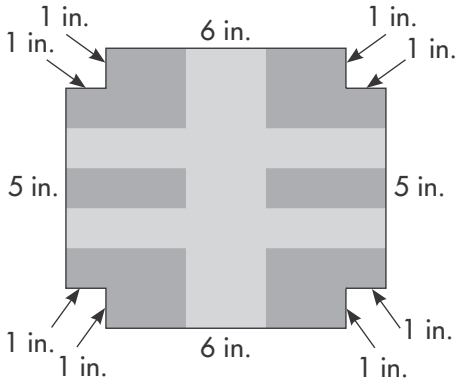
4. Select all of the ways to break apart the area of the large rectangle into the sum of the areas of two smaller rectangles. Then give the area of the large rectangle. **2 points**



- $4 \times 6 = 4 \times (4 + 2) = (4 \times 4) + (4 \times 2)$   
  $4 \times 6 = 4 \times (6 + 1) = (4 \times 6) + (4 \times 1)$   
  $4 \times 6 = 4 \times (1 + 5) = (4 \times 1) + (4 \times 5)$   
  $4 \times 6 = 4 \times (3 + 3) = (4 \times 3) + (4 \times 3)$   
  $4 \times 6 = 4 \times (3 + 1) = (4 \times 3) + (4 \times 1)$

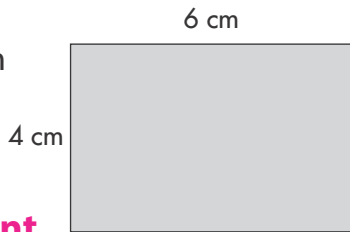
Area = **24** square inches

5. What is the total area of the design below? **1 point**



- (A)  $6 \times 5 = 30$  square inches  
 (B)  $6 \times 8 = 48$  square inches  
 (C)  $(6 \times 7) + (5 \times 1) + (5 \times 1) = 52$  square inches  
 (D)  $(6 \times 7) + (5 \times 8) = 82$  square inches

6. Josie draws a rectangle. Explain how to find the area using the Distributive Property. **1 point**

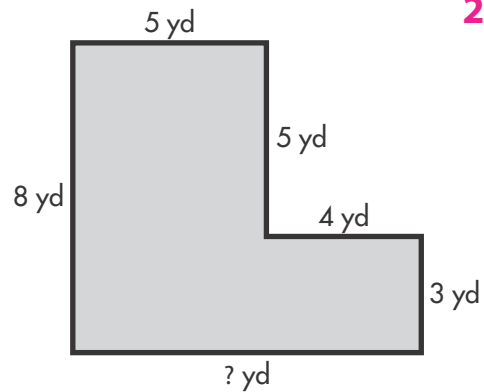


**Sample answer: I can add a vertical line to divide the rectangle into two smaller rectangles each with a length of 3 cm. The area of each smaller rectangle is  $4 \times 3$ . The area of the large rectangle is  $(4 \times 3) + (4 \times 3)$ .  
 $4 \times 3 = 12$ .  
 $12 + 12 = 24$ .  
 The area is 24 sq cm.**

7. One side of a square garden is 8 feet long. How can you find the area of the garden? **1 point**

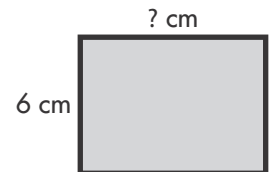
**Sample answer: The garden is a square, so all sides are the same length. I can multiply  $8 \times 8$  to find the area.  $8 \times 8 = 64$ . The area is 64 square feet.**

8. Find the missing side length. Then find the area and explain how to find it. **2 points**



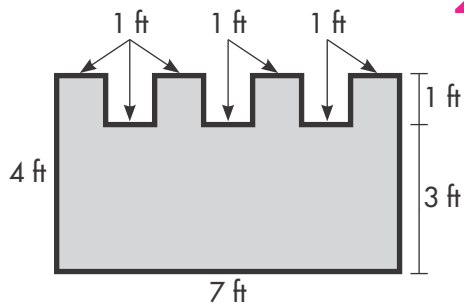
**Missing side length is 9 yd. Area is 52 square yards.  $5 \times 5 = 25$ ;  
 $3 \times 9 = 27$ ;  
 $25 + 27 = 52$**

9. This rectangle has an area of 42 square centimeters. What is the missing length? Use an equation to explain. **2 points**



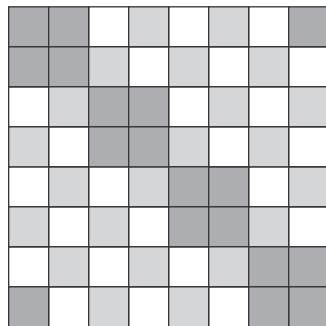
**Sample answer:  $6 \times ? = 42$ ;  $? = 7$ ; The missing length is 7 cm.**

10. What is the area of Jo's figure? Explain. **2 points**



**25 square feet; I split the figure into a rectangle and 4 squares. The area of the rectangle is  $3 \times 7 = 21$ . Each square has an area of  $1 \times 1 = 1$ . The total area of the figure is  $21 + 1 + 1 + 1 + 1 = 25$ .**

11. Taylor makes a floor mosaic with 1-foot tiles. Do the white, light gray, or dark gray tiles cover the greatest area? **1 point**

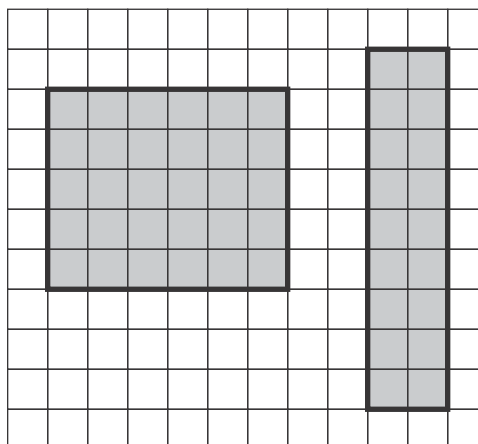


**White**

12. The length of four rectangles is 8 cm. Select the correct area of each rectangle with the given width. **1 point**

	48 sq cm	40 sq cm	32 sq cm	64 sq cm
4 cm	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 cm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 cm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 cm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

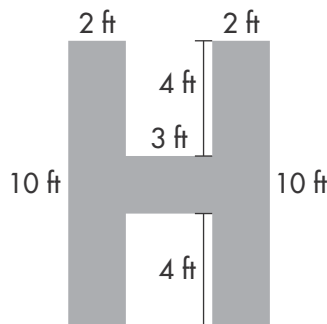
13. Explain how to find the area of each rectangle and the total area of the rectangles. **2 points**



= 1 square centimeter

**The left rectangle is 30 sq cm. The right rectangle is 18 sq cm. The total area is 48 sq cm. Sample answer: I multiplied  $6 \times 5 = 30$  and  $9 \times 2 = 18$ . Then I added  $30 + 18 = 48$ .**

14. Some students make a parade float with the letter *H* on it. Draw lines to divide the shape into rectangles. Then find its area. **2 points**



- Ⓐ 20 square feet  
 Ⓑ 46 square feet  
 Ⓒ 40 square feet  
 Ⓓ 80 square feet

**Check students' work.**

15. Ron draws 2 rectangles, each with an area of 18 square centimeters. What could be the side lengths of Ron's rectangles? Show how he could use the Distributive Property to represent the area in each case.

**2 points**

**Sample answer:**

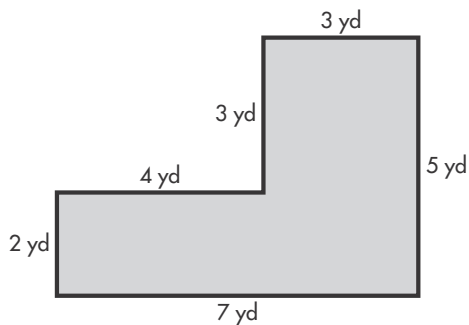
**9 cm by 2 cm,**

$$9 \times 2 = (4 \times 2) + (5 \times 2);$$

**6 cm by 3 cm,**

$$6 \times 3 = (3 \times 3) + (3 \times 3)$$

16. Mr. Wolfe builds a new deck in the shape shown below. Explain how to find the area of the deck, and solve. **2 points**

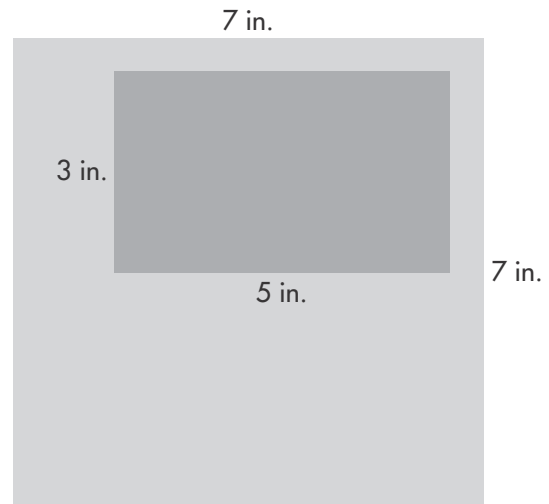


**23 sq yd; Sample: I divided the shape into a square and a rectangle. The area of the square is 9 sq yd and the area of the rectangle is 14 sq yd. The total area is 23 sq yd.**

17. Show 2 different unit squares that you can use to measure the area of these rectangles. Find the area with your unit squares. **2 points**



18. Isabella wants to know the area of the light gray part of this design.



- A. Explain how you can break this problem into simpler problems.

**1 point**

**Sample answer: The light gray area is the area of the large square minus the dark gray area.**

- B. Find the light gray area. Show your work. **2 points**

**34 square inches; Sample answer: The area of the square is  $7 \times 7 = 49$ . The dark gray area is  $3 \times 5 = 15$ . The light gray area is  $49 - 15 = 34$ .**