



Chapter 15: Understand Perimeter



Dear Family,

In the next few weeks, we will be learning about perimeter — the total distance around a figure.

Students will practice finding perimeter by:

- ✓ Counting units around a figure
- ✓ Adding measured side lengths
- ✓ Using a perimeter formula

This packet includes helpful definitions and examples on the first two pages to guide you.

Let's get ready to explore perimeter together!

Vocabulary

Area: The measure of the number of unit squares needed to cover a surface.

Square inch: A square inch is the area of a unit square.

Square unit: A unit used to measure area, such as square foot, square meter, and so on.

Unit square: A square with a side length of 1 unit, used to measure area.

Composite figure: A figure made by joining one or more figures.

Perimeter: The distance around a figure.

Formula: A mathematical rule.

-
- Homework due date: **Sunday, March 16th**
 - The Chapter 14 (Understand Area) test is on **Wednesday, March 12th**, with Monday and Tuesday's homework serving as practice.
 - Feel free to contact me with any questions at diana.charaf@archimedeian.org
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Complete homework daily based on the schedule provided below:

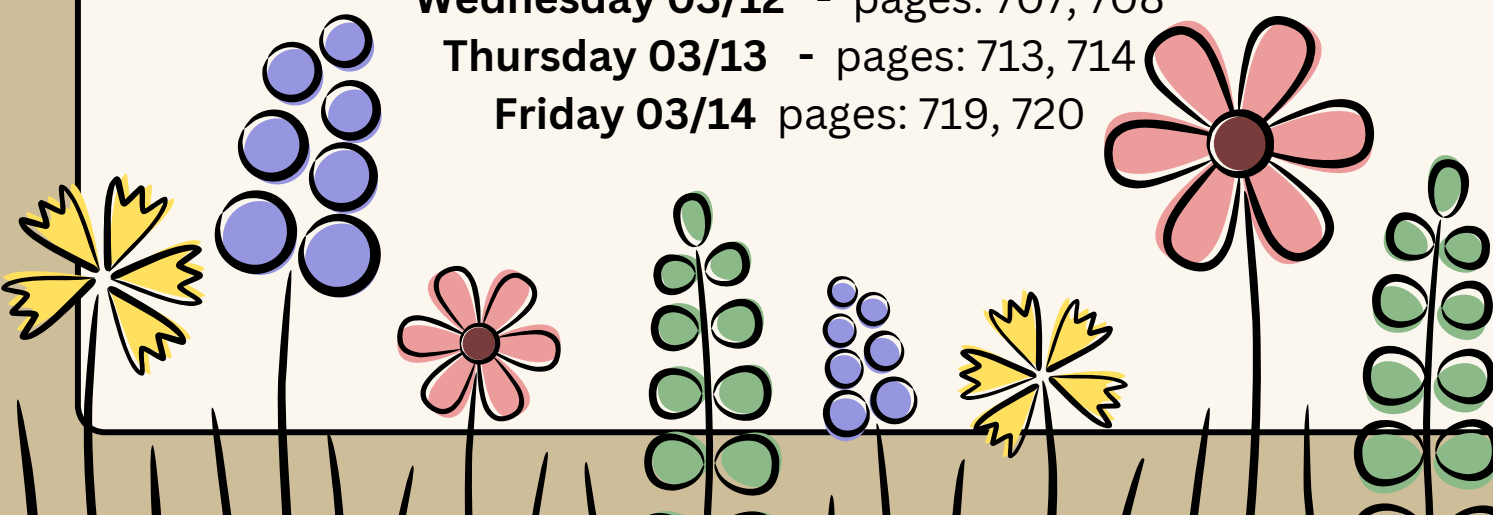
Monday 03/10 - pages: 695, 696, 697

Tuesday 03/11 - pages: 698, 699, 700

Wednesday 03/12 - pages: 707, 708

Thursday 03/13 - pages: 713, 714

Friday 03/14 pages: 719, 720



Perimeter

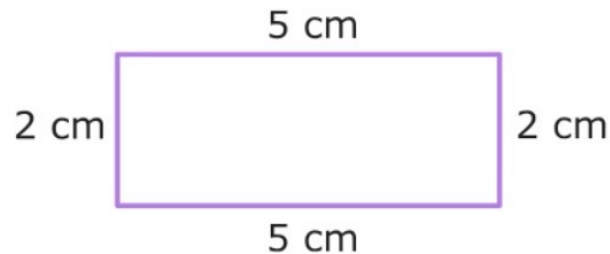
What is perimeter?

Perimeter is the distance around the outside of a two-dimensional shape. The perimeter of a shape is the total length of the shape's sides. Perimeter is measured in units such as centimeters, inches, feet, yards, meters, kilometers, and miles.

To find the perimeter of any closed shape, add the lengths of all the sides.

Let's try it!

The perimeter of the rectangle is **highlighted**.



To find the perimeter, add the lengths of all four sides.

$$2 + 5 + 2 + 5 = 14$$

So, the perimeter is 14 centimeters!

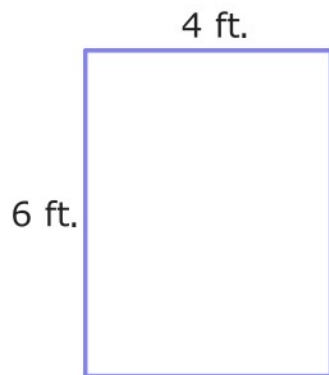
Perimeter formula for rectangles

You can use multiplication to find the perimeter of [rectangles](#) and [regular polygons](#).

To find the perimeter of a rectangle, use this formula, where ℓ is the length of the rectangle and w is the width:

$$P = (2 \times \ell) + (2 \times w)$$

Let's try it!



$$P = (2 \times 4) + (2 \times 6)$$

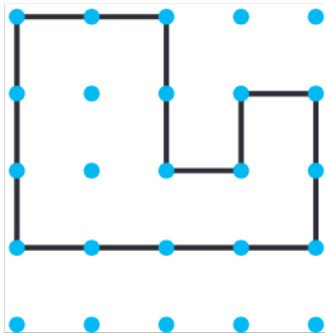
$$P = 8 + 12$$

$$P = 20$$

So, the perimeter is 20 feet!

Chapter 14 Review

1. Eduardo wants to create a garden for his grandmother. He drew this figure. What is the area of the figure he drew?



8

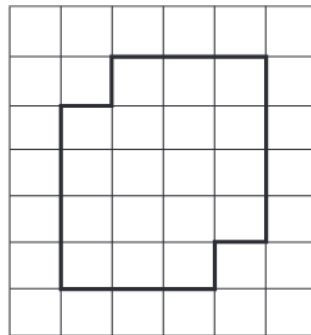
9

11

12

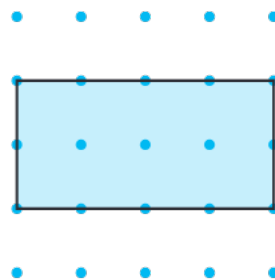
square units

2. Aaliyah drew this figure on grid paper. What is the area of the figure?



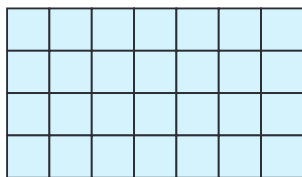
_____ square units

3. Sophia drew this rectangle on dot paper. What is the area of the rectangle?



_____ square units

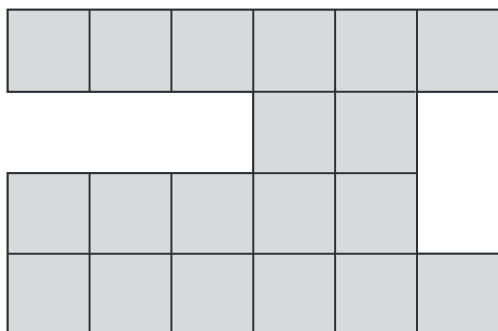
4. The drawing shows Seth's plan for a fort in his backyard.



Which equations can Seth use to find the area of the fort? Mark all that apply.

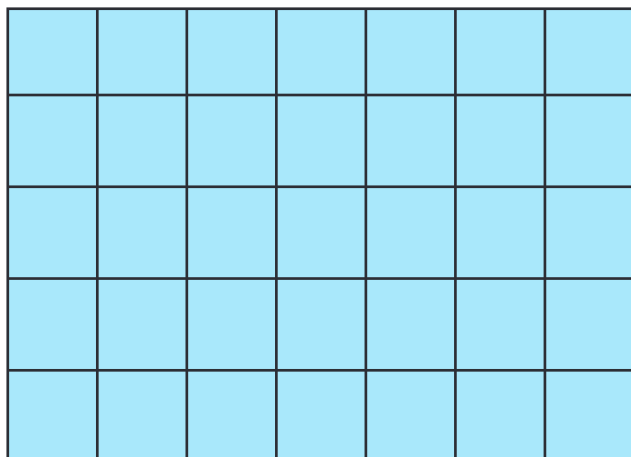
- ☒ A $4 + 4 + 4 + 4 = 16$
☒ D $4 \times 4 = 16$
☒ B $7 + 4 + 7 + 4 = 22$
☒ E $7 \times 7 = 49$
☒ C $7 + 7 + 7 + 7 = 28$
☒ F $4 \times 7 = 28$

5. Count to find the area of the figure.



_____ square units

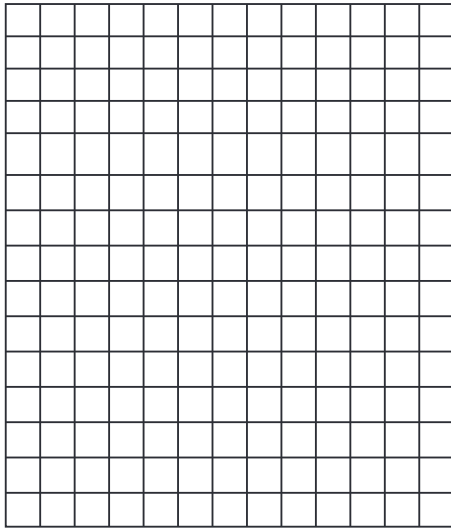
6. Find the area of the figure.



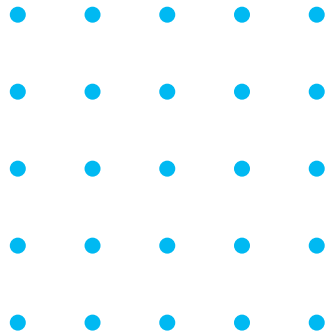
- ☐ 25 square units
☐ 35 square units
☐ 40 square units
☐ 45 square units

Name _____

7. Draw and shade four rectangles that each have an area of 12 square units. Then write an addition or multiplication equation for the area of each rectangle.

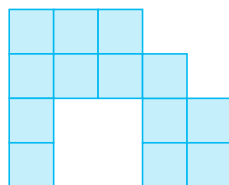


8. Mrs. Juarez's student drew this figure on dot paper. What is the area of the figure?



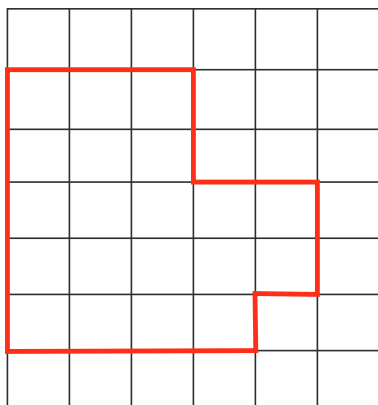
_____ square units

9. What is the area of the figure shown?



_____ square units

10. What is the area of the figure?



_____ square units

11. Germaine is tiling his pantry floor with square tiles. Each square tile has side lengths of 1 square unit. Germaine uses 5 rows of tiles with 6 tiles in each row. What is the area of the floor?

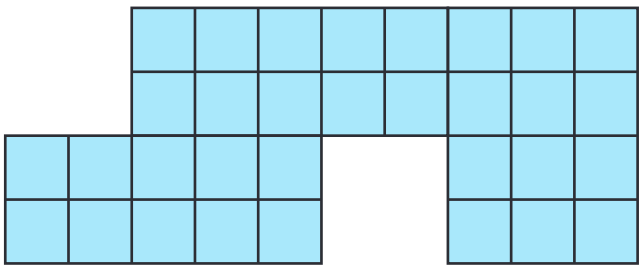
12. Elizabeth has two gardens in her yard. The first garden is 8 feet long and 6 feet wide. The second garden is the same length as the first garden. The width of the second garden is twice the width of the first garden. For Problems 12a–12d, select True or False.

- | | | | |
|------|--|----------------------------|-----------------------------|
| 12a. | The area of the first garden is 48 square feet. | <input type="radio"/> True | <input type="radio"/> False |
| 12b. | The area of the second garden is 24 square feet. | <input type="radio"/> True | <input type="radio"/> False |
| 12c. | The width of the second garden is 12 feet. | <input type="radio"/> True | <input type="radio"/> False |
| 12d. | The area of the second garden is twice the area of the first garden. | <input type="radio"/> True | <input type="radio"/> False |

Name _____

13. Ms. Fromm is a carpenter. She built a table that is 3 feet long and 4 feet wide. She also built an outdoor treehouse platform that is 3 feet long and 6 feet wide and a little stage that is 3 feet long and 8 feet wide. How do the areas of the objects she built change from the tabletop to the platform to the stage?

14. How many squares need to be added to this figure so that it has the same area as a square with a side length of 6 units?

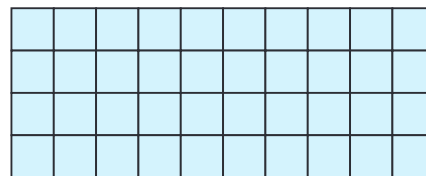


_____ squares

15. Many gardens are rectangular shapes. The four neighbors listed in the table have gardens that are each 12 feet long. How do the areas of the four gardens change when the widths change? Write the area of each garden to complete the table.

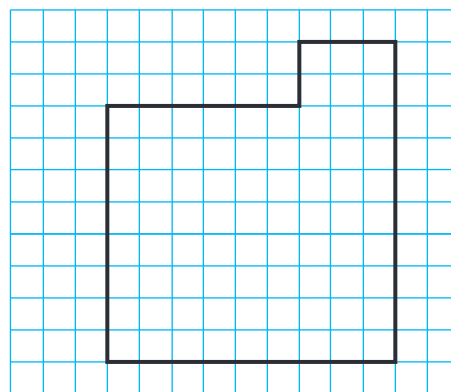
Garden Sizes			
Garden	Length (in feet)	Width (in feet)	Area (in square feet)
Mr. Mills	12	4	
Mrs. Prado	12	6	
Mr. Zhao	12	8	
Mrs. Pratt	12	10	

16. Keisha draws a sketch of her living room on grid paper. Write and solve a multiplication equation that can be used to find the area of the living room in square units.

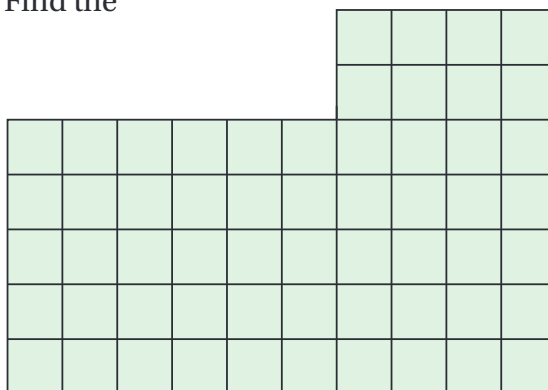


_____ square units

17. Mr. Wicks designs houses. He uses grid paper to plan a new house design. One figure he draws is shown below. What is the area of the figure?

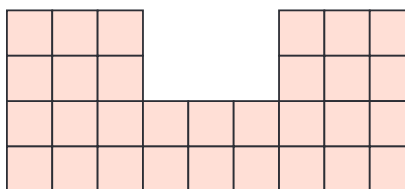


18. Draw a line to break the figure apart into two rectangles. Find the area of the figure.



19. Which equation can be used to find the area of the figure?

- ☐ A $(2 \times 3) + (2 \times 3) + (2 \times 6)$
- ☐ B $(4 \times 3) + (4 \times 3) + (4 \times 9)$
- ☐ C $(4 \times 3) + (4 \times 3) + (4 \times 3)$
- ☐ D $(2 \times 3) + (2 \times 3) + (2 \times 9)$



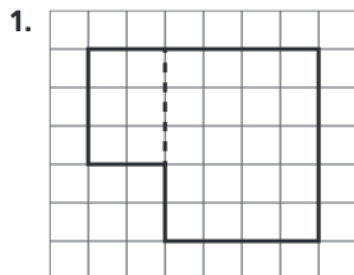
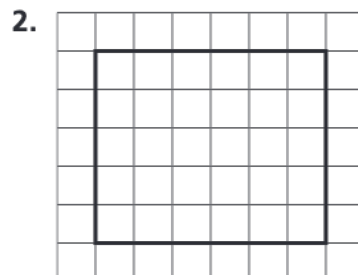
20. When you cover the surface of a figure with unit squares to find its area, why must the squares be next to each other with no space or gaps between them? Explain.

Model Perimeter

Go Online

Interactive Examples

Find the perimeter of the figure.

22 units

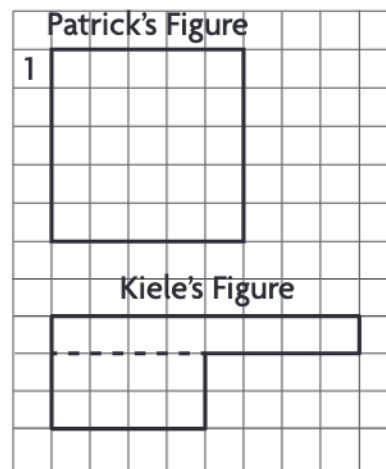
_____ units


Problem Solving

Use the drawing for Problems 3–5. Each unit represents 1 foot.

3. What is the perimeter of Patrick's figure?

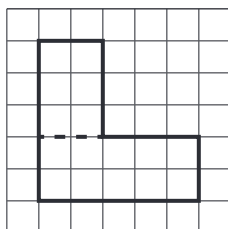
4. How much greater is the perimeter of Kiele's shape than the perimeter of Patrick's figure?



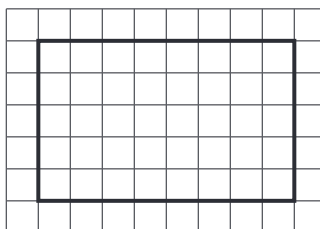
5. **WRITE**  *Math* Describe how to find the perimeter of Kiele's shape.

Lesson Check

6. Find the perimeter of the figure.



7. Find the perimeter of the figure.
Each unit represents 1 meter.



Spiral Review

8. Order the numbers from least to greatest.

3,651; 3,657; 3,561

9. Write another way to group the factors.
Then find the product.

$$(6 \times 4) \times 2$$

10. Compare. Write $<$, $>$, or $=$.

$$9,284 \bigcirc 9,824$$

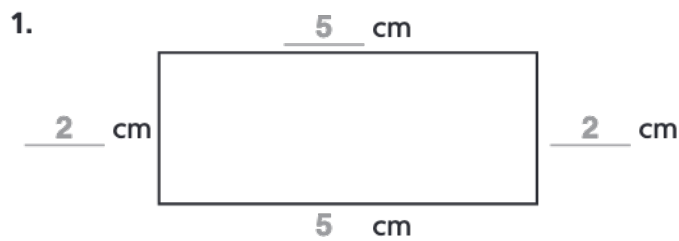
11. What number comes next?

15, 22, 29, 36, 43, . . .

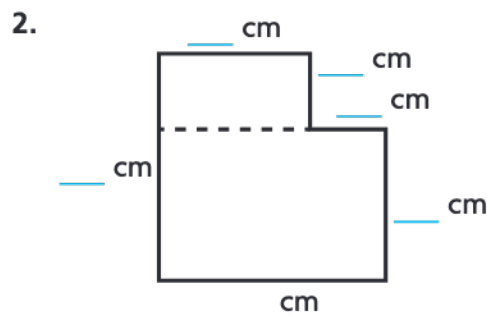
Find Perimeter

Go Online

Interactive Examples

Use a ruler to find the perimeter.

14 centimeters



_____ centimeters

Problem Solving

Draw a picture to solve problems 3 and 4.


3. Evan has a square sticker that measures 5 inches on each side. What is the perimeter of the sticker?
4. Sophie draws a figure that has 4 sides. Each side is 9 centimeters. What is the perimeter of the figure?

5. Draw a composite figure that has a perimeter of 20 units.

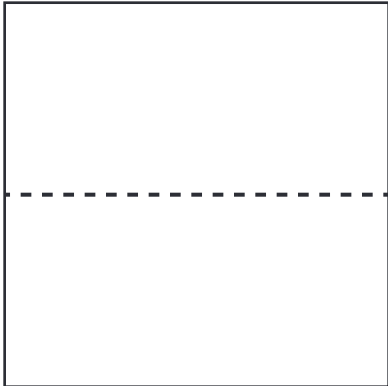
Lesson Check

Use an inch ruler for Problems 1 and 2.

6. Ty cut a label the size of the figure shown. What is the perimeter, in inches, of Ty’s label?

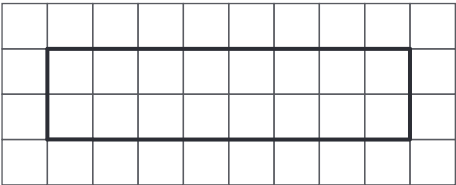


7. Julie drew the composite figure shown. What is the perimeter, in inches, of the figure?



Spiral Review

8. What is the perimeter of the figure below?



9. Four friends want to share 3 sets of scented markers equally. Each set has 12 markers. How many scented markers will each friend get?

10. Find the missing factor.

$6 \times \underline{\hspace{1cm}} = 2,400$

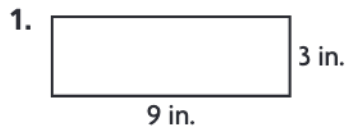
11. Compare. Write $<$, $>$, or $=$.

$5,940 \bigcirc 6,049$

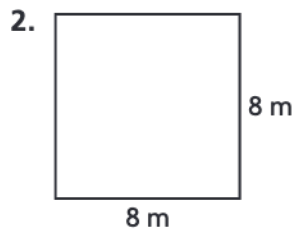
Use a Formula to Find Perimeter

Go Online

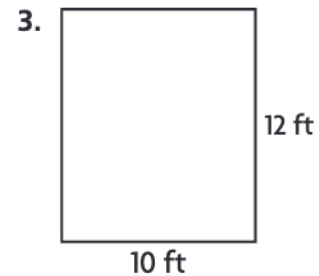
Interactive Examples

Use a formula to find the perimeter of the rectangle or square.

$$\begin{aligned} P &= (2 \times \ell) + (2 \times w) \\ &= (2 \times 9) + (2 \times 3) \\ &= 18 + 6 \\ &= 24 \end{aligned}$$

24 inches

_____ meters




_____ feet

Problem Solving

4. Troy is making a flag shaped like a square. Each side measures 12 inches. He wants to add ribbon along the edges. He has 36 inches of ribbon. Does he have enough ribbon? Explain.

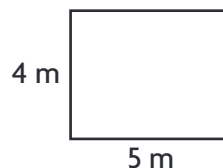
5. The width of the Ochoa Community Pool is 6 yards. The length is 12 yards. What is the perimeter of the pool?

6.  **WRITE** *Math* Viviana says the perimeter of her bedroom is 46 feet. Her room is 11 feet long and 12 feet wide. Is she right? Explain.

Lesson Check

7. What is the perimeter of a square window with sides 3 feet long?

8. What is the perimeter of the rectangle?



Spiral Review

9. Round to the nearest hundred.

372

10. Find the unknown number.

$$m \times 12 = 84$$

$m =$

11. Find the unknown number.

$$v \div 11 = 9$$

$v =$

12. Zahara scores 24 points during a basketball game. Two of her baskets are 3-point shots. She scores the rest of her points with 2-point baskets. How many 2-point baskets does Zahara score during the game?
