

# Area Puzzle Pieces

*Split, find, and add rectangle areas.*

**GRADE 3 • 3.MD.C.7d**

**CCSS.Math.Content.3.MD.C.7d** "Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## ADD THE PARTS

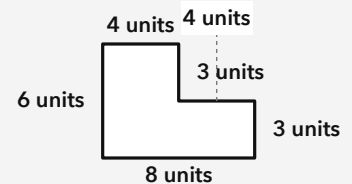
Split a rectilinear shape into rectangles that do not overlap. Find the area of each rectangle, then add the areas.

## WORKED EXAMPLE

Find the area of the shape.

1. Split it into an 8 by 3 rectangle and a 4 by 3 rectangle.
2.  $8 \times 3 = 24$  square units.
3.  $4 \times 3 = 12$  square units.
4.  $24 + 12 = 36$  square units.

**Answer: 36 square units**



## PRACTICE 4 problems

- 1** A 9-unit by 7-unit rectangle has a 2-unit by 5-unit corner cut out. What is the area left?

**ANSWER** \_\_\_\_\_

- 2** Two rectangles do not overlap. One is 10 units by 2 units. The other is 11 units by 2 units. What is their total area?

**ANSWER** \_\_\_\_\_

- 3** A 13-unit by 5-unit rectangle has a 2-unit by 2-unit corner cut out. Find the area of the new shape.

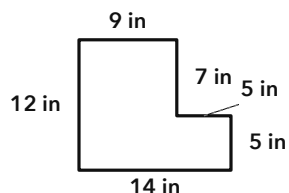
**ANSWER** \_\_\_\_\_

- 4** A shape is made from a 15-unit by 2-unit rectangle and a 5-unit by 9-unit rectangle. They do not overlap. What is the area?

**ANSWER** \_\_\_\_\_

**APPLY IT** Show your work

- 1** Mia's game mat has the shape shown. Split it into two non-overlapping rectangles. Find each area, then add to find the mat's total area in square inches.



**ANSWER** \_\_\_\_\_

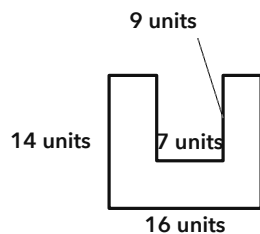
- 2** A club makes a display from a 12-foot by 5-foot rectangle and a 7-foot by 5-foot rectangle. The rectangles touch but do not overlap. What is the display's area?

WORK SPACE

**ANSWER** \_\_\_\_\_

**CHALLENGE** One step up

Find the area of the shape. Explain how you used a larger rectangle and the missing rectangle.



WORK SPACE AND ANSWER

**PART 1 • PRACTICE**

| # | PROBLEM                                                                                                                     | ANSWER                 |
|---|-----------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1 | A 9-unit by 7-unit rectangle has a 2-unit by 5-unit corner cut out. What is the area left?                                  | <b>53 square units</b> |
| 2 | Two rectangles do not overlap. One is 10 units by 2 units. The other is 11 units by 2 units. What is their total area?      | <b>42 square units</b> |
| 3 | A 13-unit by 5-unit rectangle has a 2-unit by 2-unit corner cut out. Find the area of the new shape.                        | <b>61 square units</b> |
| 4 | A shape is made from a 15-unit by 2-unit rectangle and a 5-unit by 9-unit rectangle. They do not overlap. What is the area? | <b>75 square units</b> |

**PART 2 • APPLY IT**

- 133 square inches** Split into a 9 in by 12 in left rectangle and a 5 in by 5 in bottom-right rectangle. Add  $108 + 25 = 133$  square inches. Accept any valid non-overlapping rectangle split with matching addition.
- 95 square feet** Find each rectangle's area and add:  $12 \times 5 = 60$  and  $7 \times 5 = 35$ . The total is 95.

**CHALLENGE**

**161 square units. The larger rectangle is  $16 \times 14 = 224$  square units. Subtract the missing  $7 \times 9$  rectangle,  $224 - 63 = 161$ .**

Accept any correct non-overlapping rectangle decomposition. Area answers should include square units, square inches, or square feet as appropriate.