LESSON MAKER PRO

Rectangle Shape Quest

Find area and perimeter in joined rectangle shapes.

GRADE 4 · 4.GSR.8.3

4.GSR.8.3 "Solve problems involving area and perimeter of composite rectangles involving whole numbers with known side lengths."

NAME _____ DATE _____

BUILD AND TRACE

Add the areas of rectangles that do not overlap. For perimeter, trace only the outside edges. Do not count a side where two rectangles touch.

WORKED EXAMPLE

An L-shaped patio is a 13-unit by 7-unit rectangle with a 4-unit by 3-unit corner cut out. Find the area and perimeter.

1. Whole rectangle area: 13 x 7 = 91 square units.
2. Cutout area: 4 x 3 = 12 square units. Area: 91 - 12 = 79 square units.
3. Cutting out the corner replaces equal edge lengths. Perimeter: 2 x (13 + 7) = 40 units.

Answer: Area = 79 square units; perimeter = 40 units

PRACTICE 5 problems

1 A shape is made by joining a 12-unit by 8-unit rectangle and a 6-unit by 5-unit rectangle. What is the total area?

ANSWER _____

2 A 14-unit by 6-unit rectangle and a 9-unit by 5-unit rectangle are joined along a 5-unit side. What is the perimeter?

ANSWER _____

3 A 15-unit by 10-unit rectangle has a 6-unit by 5-unit corner cut out. What is the area?

ANSWER _____

4 A 12-unit by 9-unit rectangle has a 5-unit by 6-unit corner cut out. What is the perimeter?

ANSWER _____

5 An L-shaped floor is made from an 11-unit by 8-unit rectangle and a 10-unit by 6-unit rectangle joined along a 6-unit side. Find the area and perimeter.

ANSWER _____

APPLY IT Show your work

1 Maya joins a 14-inch by 8-inch poster board and a 10-inch by 6-inch poster board to make a display. How much display space does she have?

WORK SPACE

ANSWER _____

2 A robot contest track is made from a 15-foot by 9-foot rectangle and an 11-foot by 5-foot rectangle joined along a 5-foot side. How many feet of tape are needed to outline the outside edge?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A 14-unit by 12-unit play mat has a 6-unit by 8-unit corner cut out. Find its area and perimeter. Explain why the perimeter stays the same as the whole rectangle's perimeter.

_____

_____

ANSWER KEY

Rectangle Shape Quest

GRADE 4 · 4.GSR.8.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A shape is made by joining a 12-unit by 8-unit rectangle and a 6-unit by 5-unit rectangle. What is the total area?	**126 square units**
2	A 14-unit by 6-unit rectangle and a 9-unit by 5-unit rectangle are joined along a 5-unit side. What is the perimeter?	**58 units**
3	A 15-unit by 10-unit rectangle has a 6-unit by 5-unit corner cut out. What is the area?	**120 square units**
4	A 12-unit by 9-unit rectangle has a 5-unit by 6-unit corner cut out. What is the perimeter?	**42 units**
5	An L-shaped floor is made from an 11-unit by 8-unit rectangle and a 10-unit by 6-unit rectangle joined along a 6-unit side. Find the area and perimeter.	**Area = 148 square units; perimeter = 58 units**

PART 2 · APPLY IT

1. **172 square inches** Add the two rectangle areas: 14 x 8 = 112 and 10 x 6 = 60. Then add 112 + 60.
2. **70 feet** Add both rectangle perimeters, then subtract the shared side twice: 48 + 32 - 10 = 70.

CHALLENGE

Area = 120 square units; perimeter = 52 units. The cut removes two outside edge lengths and adds equal new edge lengths.

Accept correct answers with or without unit labels when the value is correct. For a corner cutout, accept the original rectangle's perimeter if the student correctly traces or explains the equal removed and added edge lengths.