

## KEY CONCEPT OVERVIEW

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In Lessons 23 through 30, students solve real-world problems and complete projects by using the concepts of area and perimeter.

You can expect to see homework that asks your child to do the following:

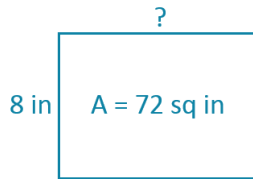
- Determine the perimeter when given information about a shape.
- Draw different rectangles that have the same perimeter and label the lengths and widths of each.
- Determine both the area and perimeter of a given rectangle when given a drawing or a word problem.

## SAMPLE PROBLEM (From Lesson 28)

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The area of Mason’s rectangular painting is 72 square inches. The width of the painting is 8 inches.

- a. Estimate to draw Mason’s painting, and label the side lengths.



- b. What is the length of the painting?

$$\text{Length} = 72 \text{ sq in} \div 8 \text{ in} = 9 \text{ in}$$

**The length of the painting is 9 inches.**

- c. What is the perimeter of Mason’s painting?

$$\text{Perimeter} = 8 \text{ in} + 8 \text{ in} + 9 \text{ in} + 9 \text{ in} = 34 \text{ in}$$

**The perimeter of Mason’s painting is 34 inches.**

- d. Mason’s mom hangs his painting on a wall where she has already hung two of Mason’s other paintings. The areas of the other paintings are 64 square inches and 81 square inches. What is the total area of all three paintings that are hanging on the wall?

$$\text{Total area} = 64 \text{ sq in} + 81 \text{ sq in} + 72 \text{ sq in} = 217 \text{ sq in}$$

**The total area of all three paintings is 217 square inches.**

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at [GreatMinds.org](http://GreatMinds.org).

**HOW YOU CAN HELP AT HOME** 

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- Read *Spaghetti and Meatballs for All! A Mathematical Story*, by Marilyn Burns, with your child. (Ask your school librarian or search online for a copy.) Talk about how area and perimeter are important to the story.
- Give your child a tape measure and ask him to find the area and perimeter of the surfaces of objects around the house, such as the top of a desk or table, a computer or TV screen, a cupboard door, a cookie sheet, a window, or a door. Make sure that each of the chosen objects has a rectangular surface. Ask your child to record his findings and talk about which objects have the largest and smallest area and perimeter measurements.