EUREKA MATH™ TIPS FOR PARENTS

KEY CONCEPT OVERVIEW

In Lessons 9 through 11, students continue to work with areas of rectangles.

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

- Break apart rectangles and reconnect the pieces to form new rectangles, showing that the areas are still the same.

- Use the break apart and distribute strategy to find the area of large rectangles.

- Use multiplication to show how areas of rectangles are the same even though the side lengths are different.
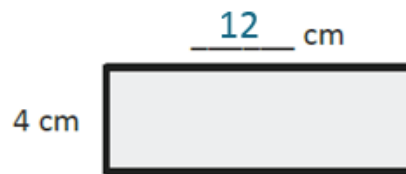
SAMPLE PROBLEM *(From Lesson 11)*

The rectangles below have the same area. Move the parentheses to find the unknown side lengths. Solve.

6 cm

8 cm

$\underline{12}$ cm

4 cm
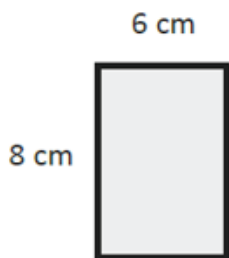
Area: $8 \times \underline{6} = \underline{48}$
Area: $\underline{48}$ sq cm

Area: $8 \times 6 = (4 \times 2) \times 6$
$= 4 \times (2 \times 6)$
$= \underline{4} \times \underline{12}$
$= \underline{48}$

Area: $\underline{48}$ sq cm

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

Play the How Many Rectangles? game with your child.

1. Remove the jacks, queens, kings, aces, and jokers from a deck of playing cards, and shuffle the deck.

2. One player chooses either to roll one die and pick one card off the top of the deck of playing cards and multiply the numbers together OR to pick two cards off the top of the deck and multiply the numbers together. The product is the "target area."

3. Players have two minutes to draw as many rectangles as they can with the target area measure from Step 2. For each rectangle, players must label side lengths and write a correct multiplication equation for the target area.

4. Players show each other their rectangles and agree on which ones are correct. Correct drawings receive 5 points. (If players draw the same rectangles, each still receives the points.) Incorrect rectangles receive 0 points.

5. Repeat Steps 1–4. The first player to break 100 points wins the game.

For example, your child rolls a 6 on the die. She then picks a 4 from the deck of playing cards. She multiplies 6×4 to get 24. All players now have two minutes to draw all the rectangles they can with an area of 24 square units, labeling the side lengths and writing the area multiplication equations. (See image.) Players receive 5 points for each correct rectangle. For the drawings shown, the player would only receive 10 points because two rectangles are correct (4×6 and 2×12) and two are not (neither 1×12 nor 3×7 equals 24).