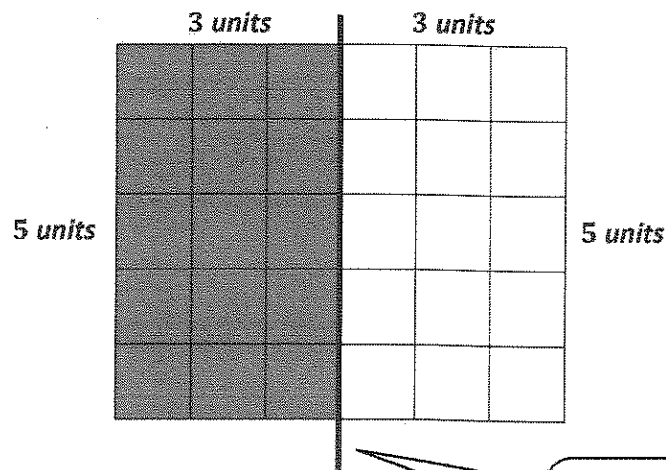


G3-M4-Lesson 9

1. Use the grid to answer the questions below.



I can draw a line between the 3rd and 4th columns to make 2 equal rectangles.

- a. Draw a line to divide the grid into 2 equal rectangles. Shade in 1 of the rectangles that you created.
- b. Label the side lengths of each rectangle.
- c. Write an equation to show the total area of the 2 rectangles.

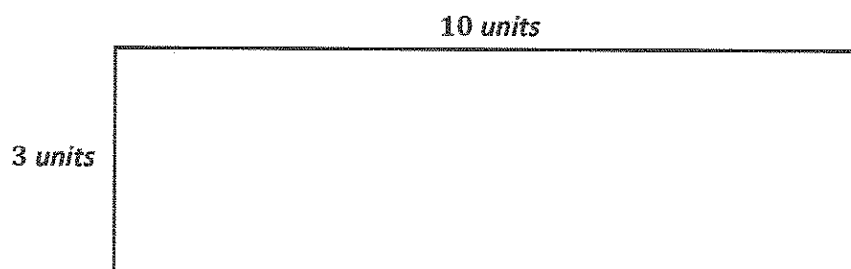
I can count the units on each side to help me label the side lengths of each rectangle.

$$\begin{aligned}\text{Area} &= (5 \times 3) + (5 \times 3) \\ &= 15 + 15 \\ &= 30\end{aligned}$$

The total area is 30 square units.

I can find the area of each smaller rectangle by multiplying 5×3 . Then, I can add the areas of the 2 equal rectangles to find the total area.

2. Phoebe cuts out the 2 equal rectangles from Problem 1(a) and puts the two shorter sides together.
- a. Draw Phoebe's new rectangle, and label the side lengths below.



I can label the side lengths using what I know about the 2 equal rectangles in Problem 1. The length of this rectangle is 10 units because $5 \text{ units} + 5 \text{ units} = 10 \text{ units}$.

- b. Find the total area of the new, longer rectangle.

$$\begin{aligned} \text{Area} &= 3 \times 10 \\ &= 30 \end{aligned}$$

The total area is 30 square units.

I can find the area by multiplying the side lengths.

- c. Is the area of the new, longer rectangle equal to the total area in Problem 1(c)? Explain why or why not.

Yes, the area of the new, longer rectangle is equal to the total area in Problem 1(c). Phoebe just rearranged the 2 smaller, equal rectangles, so the total area didn't change.

I know that the total area doesn't change just because the 2 equal rectangles were moved around to form a new, longer rectangle. No units were taken away and none were added, so the area stays the same.