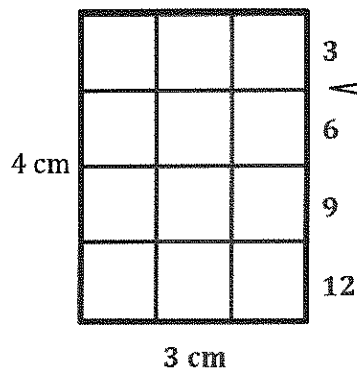


G3-M4-Lesson 5

1. Use the centimeter side of a ruler to draw in the tiles. Then, find and label the unknown side length. Skip-count the tiles to check your work. Write a multiplication sentence for each tiled rectangle.

- a. Area: 12 square centimeters



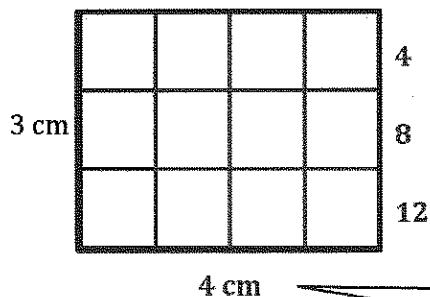
I can use my ruler to mark each centimeter. Then, I can connect the marks to draw the tiles. I'll count the square units and label the unknown side length 3 cm.

Next, I'll skip-count by 3 to check that the total number of tiles matches the given area of 12 square centimeters.

$$\underline{4} \times \underline{3} = \underline{12}$$

I can write 3 for the unknown factor because my tiled array shows 4 rows of 3 tiles.

- b. Area: 12 square centimeters



After I use my ruler to draw the tiles, I can count to find the unknown side length and label it.

$$\underline{3} \times \underline{4} = \underline{12}$$

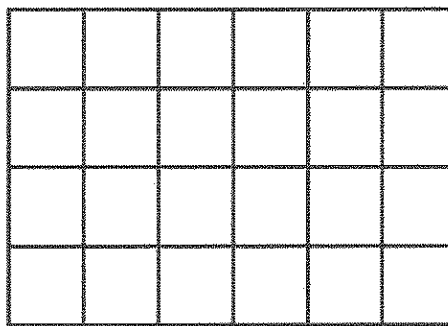
I can write the number sentence $3 \times 4 = 12$ because there are 3 rows of 4 tiles, which is a total of 12 tiles.

The area of the rectangles in parts (a) and (b) is 12 square centimeters. That means both rectangles have the same area even though they look different.

2. Ella makes a rectangle with 24 square centimeter tiles. There are 4 equal rows of tiles.
- a. How many tiles are in each row? Use words, pictures, and numbers to support your answer.



I can draw columns of 4 tiles until I have a total of 24 tiles.

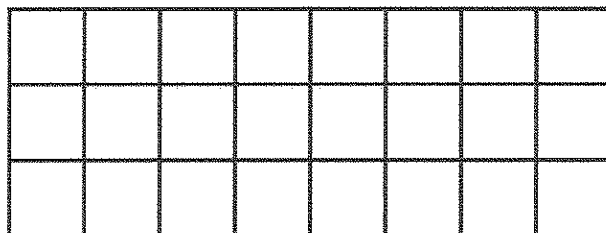


4 8 12 16 20 24

I had to draw 6 columns of 4 tiles to have a total of 24 tiles. That means there are 6 tiles in 1 row.

There are 6 tiles in each row. I drew columns of 4 tiles until I had a total of 24 tiles. Then I counted how many tiles are in 1 row. I could also find the answer by thinking about the problem as $4 \times \underline{\quad} = 24$ because I know that $4 \times 6 = 24$.

- b. Can Ella arrange all of her 24 square centimeter tiles into 3 equal rows? Use words, pictures, and numbers to support your answer.



3 6 9 12 15 18 21 24

I drew columns of 3 tiles until I got to a total of 24 tiles. I had to draw 8 columns.

Yes, Ella can arrange all of her 24 tiles into 3 equal rows. I drew columns of 3 tiles until I had a total of 24 tiles. I can use my picture to see that there are 8 tiles in each row. I can also use multiplication to help me because I know that $3 \times 8 = 24$.

- c. Do the rectangles in parts (a) and (b) have the same total area? Explain how you know.

Yes, the rectangles in parts (a) and (b) have the same area because they are both made up of 24 square centimeter tiles. The rectangles look different because they have different side lengths, but they have the same area.

This is different than Problem 1 because the rectangles in Problem 1 had the same side lengths. They were just rotated.