G3-M7-Lesson 18
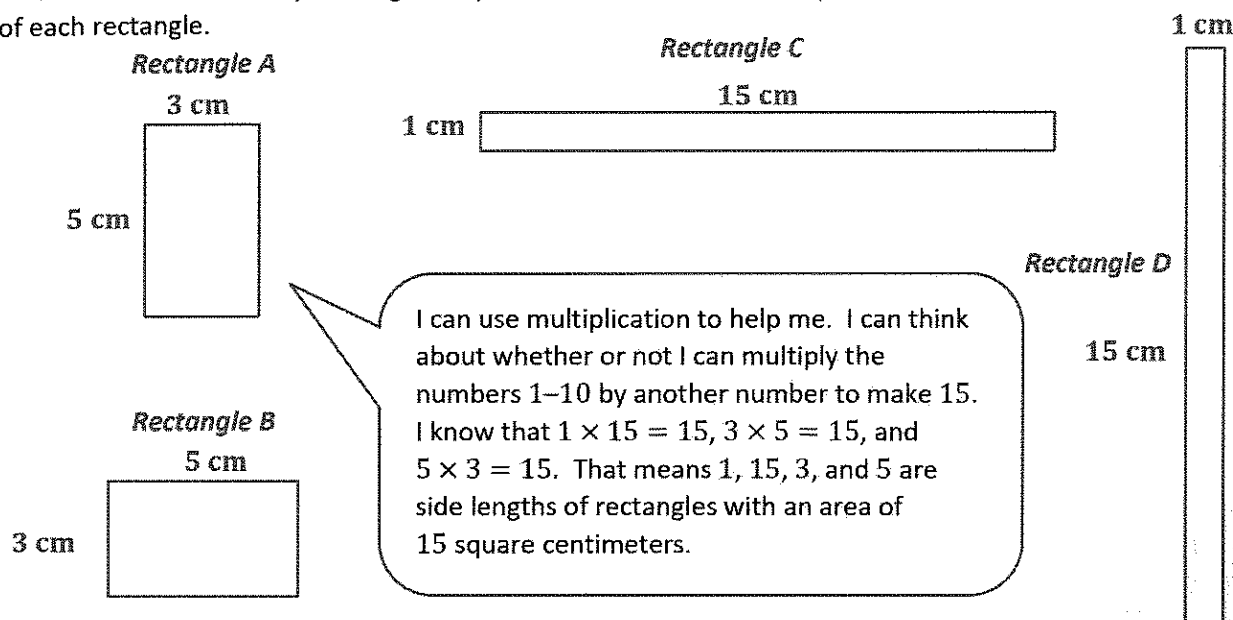
Estimate to draw as many rectangles as you can with an area of 15 square centimeters. Label the side lengths of each rectangle.

Rectangle A

3 cm

5 cm

Rectangle C

15 cm

1 cm

1 cm

Rectangle D

15 cm

> I can use multiplication to help me. I can think about whether or not I can multiply the numbers 1–10 by another number to make 15. I know that $1 \times 15 = 15$, $3 \times 5 = 15$, and $5 \times 3 = 15$. That means 1, 15, 3, and 5 are side lengths of rectangles with an area of 15 square centimeters.

Rectangle B

5 cm

3 cm

a. Which rectangles above have the greatest perimeter? How do you know just by looking at their shape?

Rectangles C and D have the greatest perimeter. They both have a perimeter of 32 centimeters. I can tell just by looking at their shapes that they have the greatest perimeter because they are longer and skinnier than Rectangles A and B.

> I know that long, skinny rectangles have larger perimeters than short, wide rectangles with the same area. Long side lengths add up to greater perimeters than short side lengths.

b. Which rectangles above have the smallest perimeter? How do you know just by looking at their shape?

Rectangles A and B have the smallest perimeter. They both have a perimeter of 16 centimeters. I can tell just by looking at their shapes that they have the smallest perimeter because they are shorter and wider than Rectangles C and D.

> I know that short, wide rectangles have smaller perimeters than long, skinny rectangles with the same area. Short side lengths add up to smaller perimeters than long side lengths.