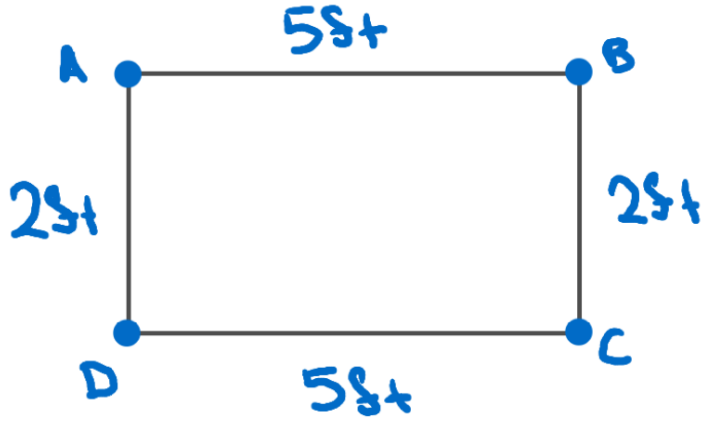
Let's say we have a rectangle and we want to walk around it.



From point A to B how much do we walk? 5 ft

From point B to C how much do we walk?____

From point C to D how much do we walk?____

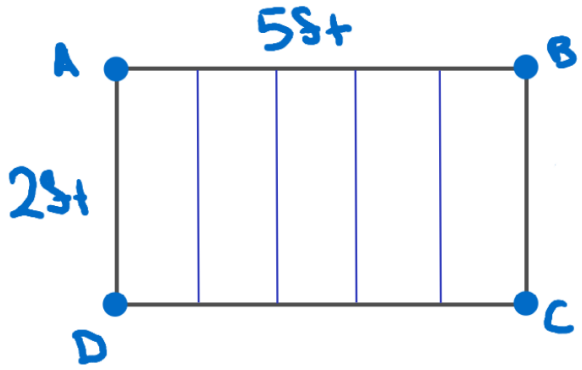
From point D to A how much do we walk? 2 ft

How much did we walk in total? **Answer**: 14 ft

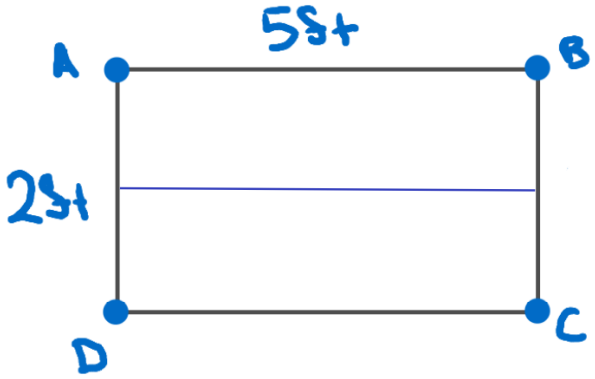
We call this the **perimeter** the distance around a shape. The perimeter of this rectangle is 14 ft.

The **area** of a shape is the area inside of it.

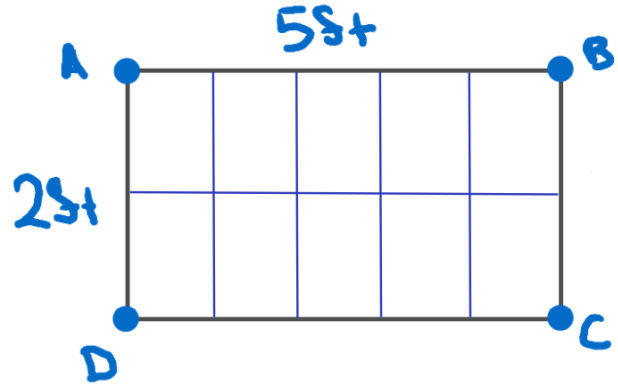
We can divide vertically the amount of rectangles we would have. In our case it is 5.



We can divide horizontally the amount of rectangles we would have. In our case it is 2.



We now combine these two steps together and get:

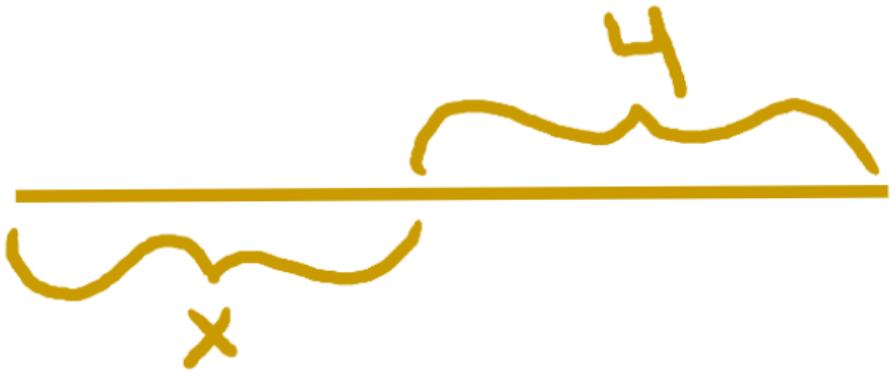


How many rectangles have we created? _____

The area of a 2 ft x 5 ft rectangle is 10 ft^2.

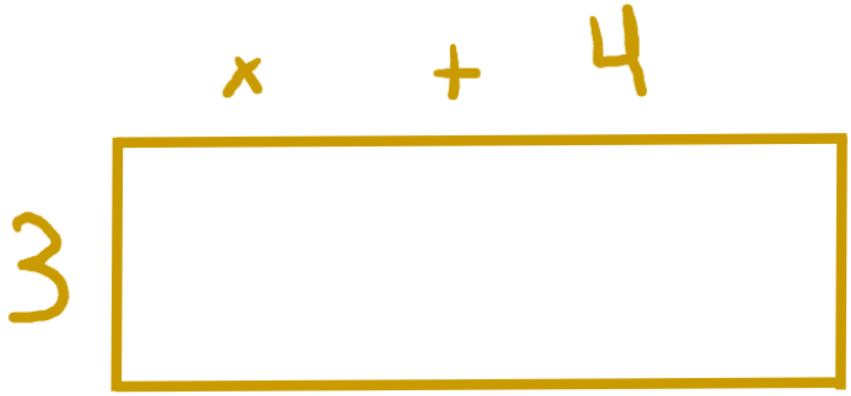
The length of the rectangle is 5ft and the width is 2ft.
Area = length x width = 5 * 2 = 10

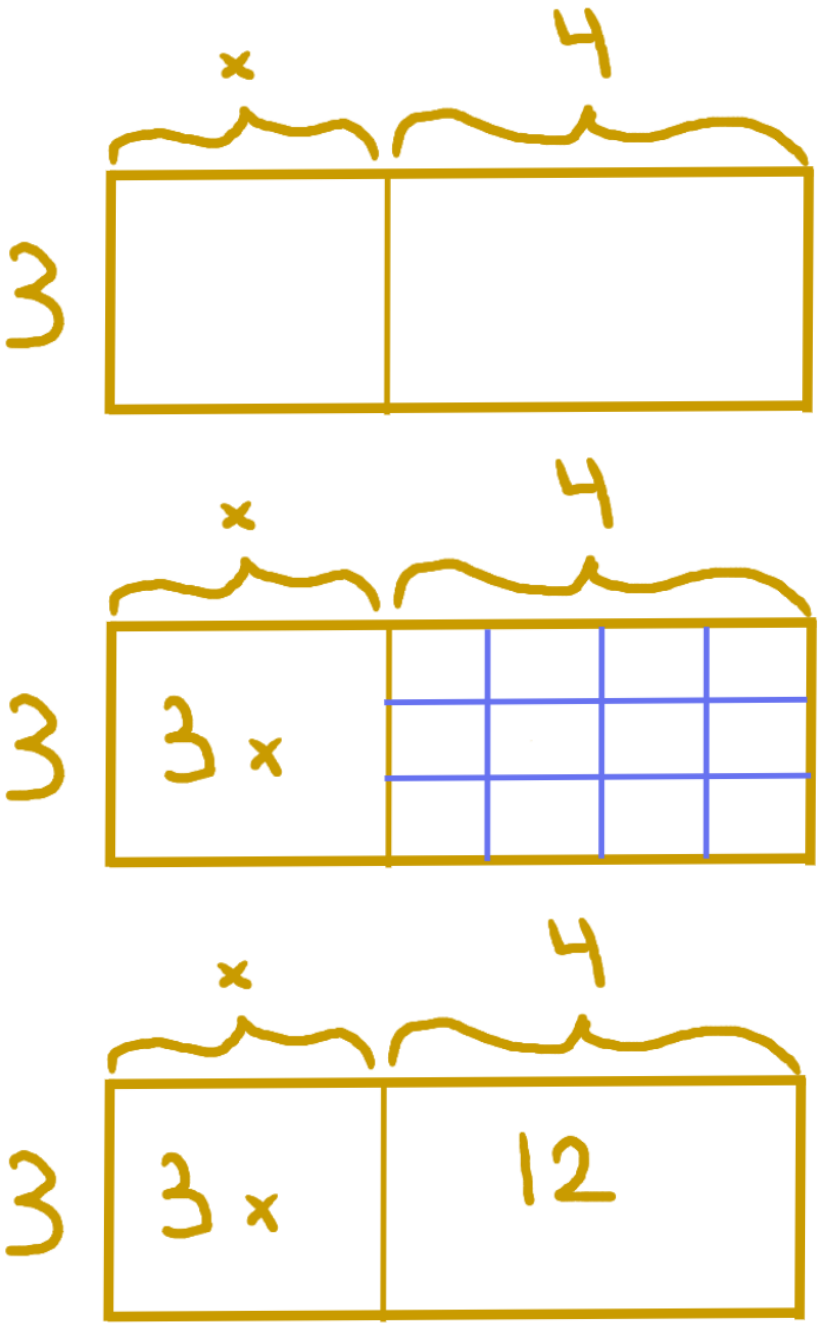
Let's say we have a piece of rope and its length is some unknown length x and 4. What is the length of the rope?



Answer: x + 4

The length of the following rectangle is x + 4 and width is 3. We try to find the area of the rectangle.





Area = 3x + 12

The **area** of the rectangle is 3x + 12

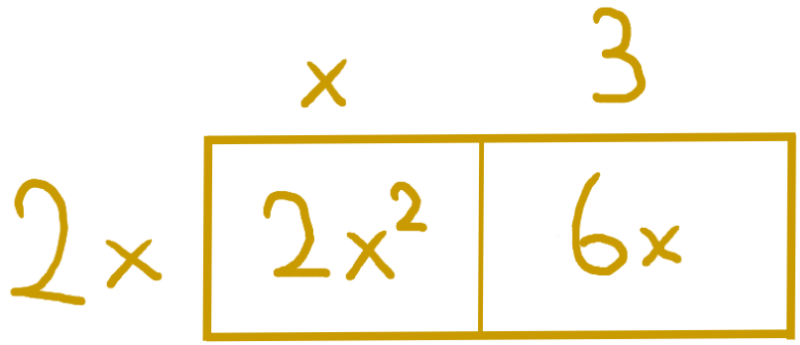
If we know the distributive property we could of done the following instead:

Area = width x length = 3 (x + 4) = 3x + 12

We will use this knowledge to understand the Box Method in relation to factor form.

Example 1

2x (x + 3) = 2x^2 + 6x



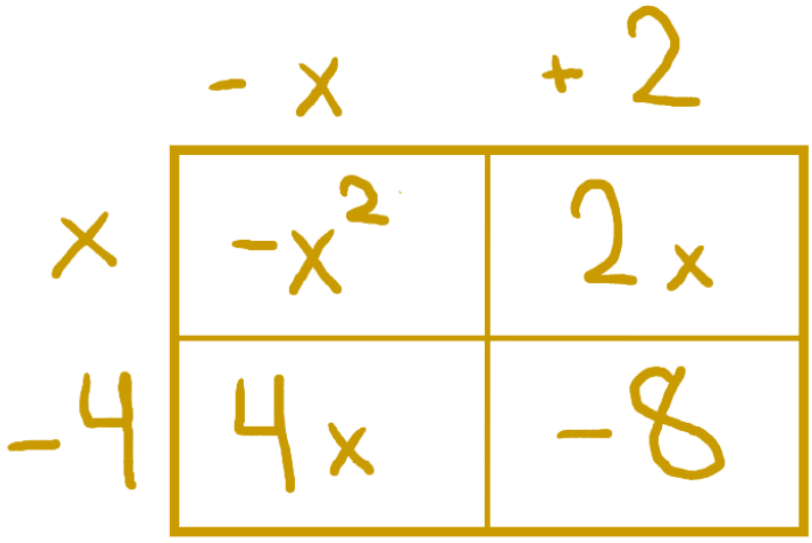
We could have also used the distributive property.

Example 2

(x - 4) (-x + 2)

= -x^2 + 2x + 4x + -8

= -x^2 + 6x - 8



We could have used the FOIL method too. It depends on what you feel comfortable with.