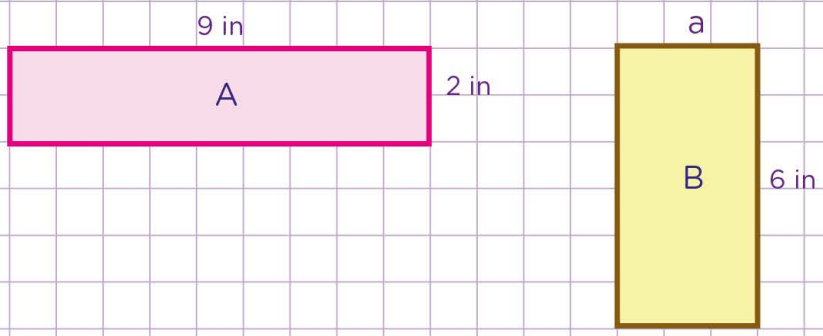
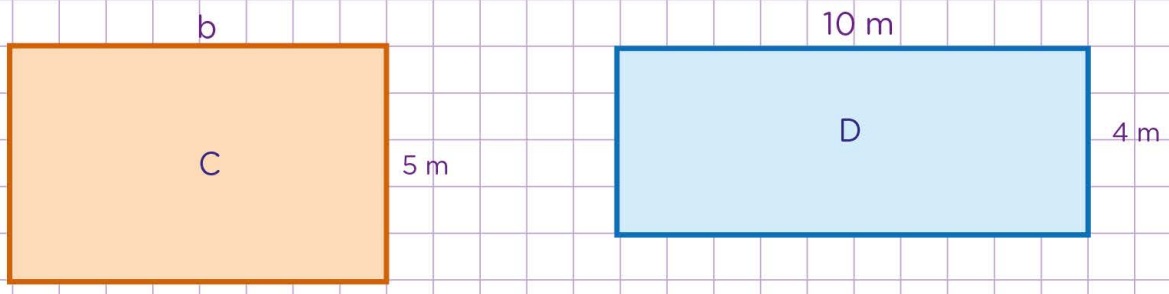
Name: ..... Class: .....

Relationship between area and perimeter of rectangles

1. Find the perimeter of rectangle **B** below given that both rectangles have the same area.



2. Find the perimeter of rectangle **C** below given that both rectangles have the same area.



Solution

mathskills4kids

Name: ..... Class: .....

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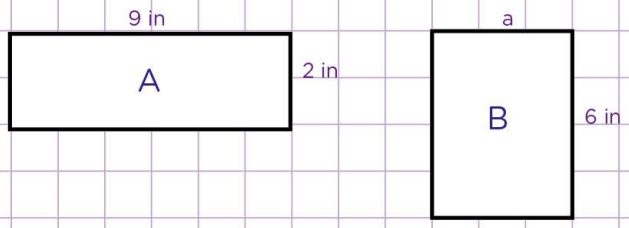


Let's first of all find the area of rectangle A (RA)

Length = 9 in

Width = 2 in

Area (RA) = 9 in x 2 in = 18 in^2

So, the area of rectangle A is 18 square inches.

Secondly, let's find the missing side in rectangle B (RB).

Since both rectangles have the same area,

it implies that the area of RB is also 18 square inches.

Length = 6 in

Width = a

Area = Length x width

18 in^2 = 6 in x a

Now, divide both sides by 6 in to find the a.

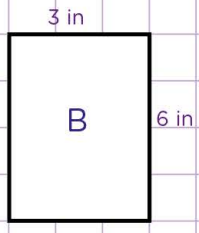
$$\frac{18\ in^2}{6\ in} = \frac{a \times 6\ in}{6\ in}$$

$$\frac{3\ in \times 6\ in}{1 \times 6\ in} = a$$

3 in = a

So, the width = 3 in

Finally, let's find the perimeter of RB.



Perimeter = sum of all the side lengths

= (3 + 6 + 3 + 6) in

= 18 in

So, the perimeter of rectangle B is 18 inches.

2. Find the perimeter of rectangle **C** below given that both rectangles have the same area.

The perimeter of rectangle **C** is 13 meters.