Conditions

Shoebox A and shoebox B are similar, The ratio of the length of shoebox A to the lenght of shoebox B is 2:3. The length of shoebox A is 10 inches, and it width is 6 inches. What is the perimeter of shoebox B

Solution

As these shoeboxes are similar, then their ratio of the length is equal to a ratio of the width.

So, the length x of shoebox B is:

$$\frac{10}{2} = \frac{x}{3}$$

$$x = 15$$

And the width y of shoebox B is:

$$\frac{6}{2} = \frac{y}{3}$$

$$y = 9$$

As shoebox has a rectangular form, then the perimeter is:

$$2 \cdot (9 + 15) = 48$$

Answer: 48