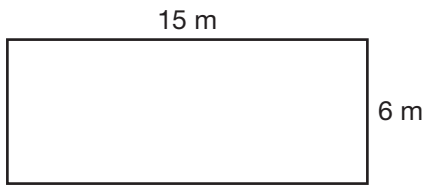


# Perimeter

Find the perimeter of the figure below.



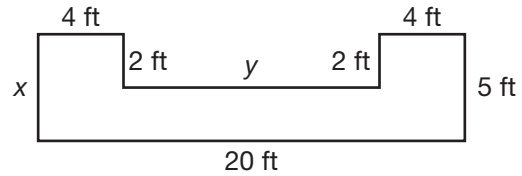
**By using a formula:**

There are two equal lengths and equal widths, so you can use the formula

$$P = 2\ell + 2w.$$

$$\begin{aligned} P &= 2(6) + 2(15) \\ &= 12 + 30 \\ &= 42 \end{aligned}$$

The perimeter is 42 m.



Sometimes you are not given the lengths of all the sides of a polygon.

Side  $x$  is the same size as the side parallel to it. So, side  $x = 5$  ft.

You can figure out the length of side  $y$  by looking at the side parallel to it. That side is 20 ft.

$$4 \text{ ft} + 4 \text{ ft} + y \text{ ft} = 20 \text{ ft}$$

$$8 \text{ ft} + y \text{ ft} = 20 \text{ ft}$$

$$8 \text{ ft} + 12 \text{ ft} = 20 \text{ ft}$$

So,  $y = 12$  ft.

Now you can add up all the sides to find the perimeter.

$$4 + 2 + 12 + 2 + 4 + 5 + 20 + 5 = 54$$

$$P = 54 \text{ ft}$$

Find the perimeter of each figure.

1. rectangle, length 5.1 ft, width 7.4 ft

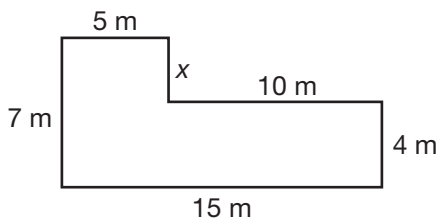
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2. regular octagon, sides 4.6 cm long

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Find the length of each unknown side. Then find the perimeter.

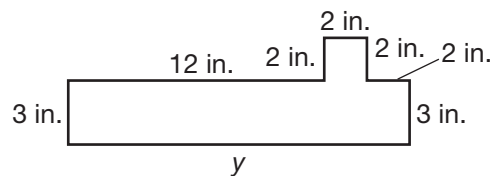
3.



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4.



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