

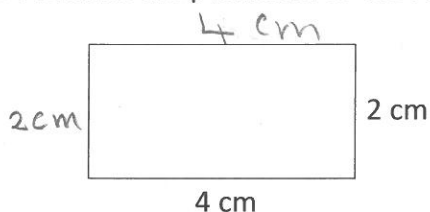
Any 2D shape is made up of a series of lines (or sides - a circle has one curved side). The lines themselves have *linear measurements* – they can be measured using standard units (cm, in, km, etc.). However, the shape *created* by those lines (the 2D shape) has two main types of measurements associated with it: Each 2D shape has a perimeter and an *area*.

Perimeter

The perimeter of a 2D object is the linear distance around the outside of the object. There is no formula for perimeter (except for a circle); you simply **add the lengths of all of the sides of the object**.

Example 1

Determine the perimeter of the rectangle shown below.

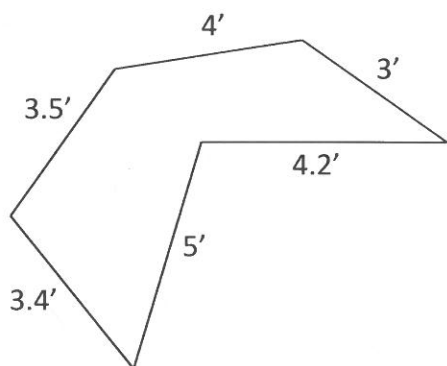


$$\text{Perimeter} = 4\text{cm} + 2\text{cm} + 4\text{cm} + 2\text{cm} = 12\text{cm}$$

$$\begin{aligned} \text{OR} \\ \text{Perimeter} &= 2 \times \text{length} + 2 \times \text{width} \\ &= 2 \times 4\text{cm} + 2 \times 2\text{cm} \\ &= 8\text{cm} + 4\text{cm} \end{aligned}$$

Example 2

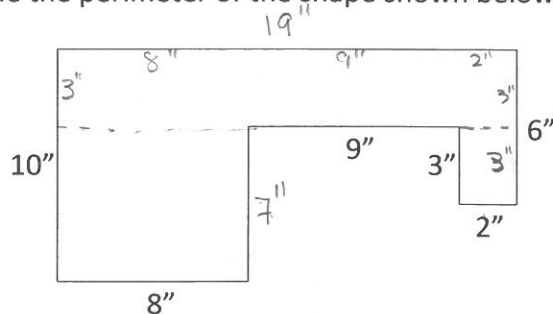
Determine the perimeter of the shape shown below.



$$\begin{aligned} \text{Perimeter} &= 4' + 3' + 4.2' + 5' + 3.4' + 3.5' \\ \text{Perimeter} &= 23.1' \end{aligned}$$

Example 3

Determine the perimeter of the shape shown below



$$\begin{aligned} \text{Perimeter} &= 19'' + 6'' + 2'' + 3'' + 9'' + 7'' + 8'' + 10'' \\ &= 64'' \end{aligned}$$