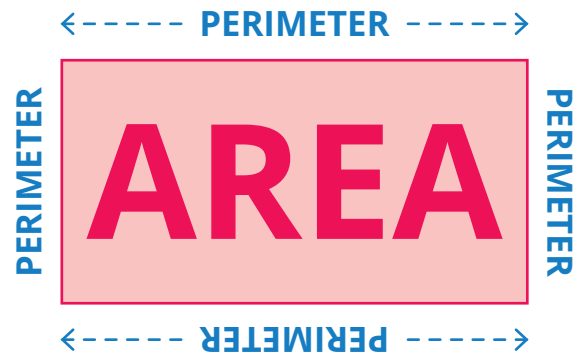


Key Vocabulary

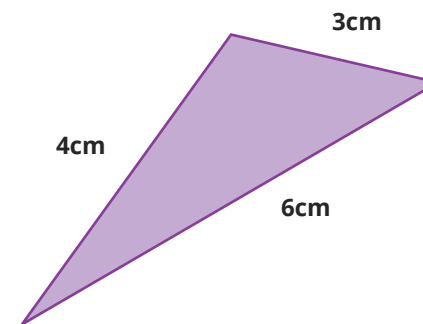
area	horizontal	polygon	three-dimensional (3D)	curved edge
perimeter	vertical	regular	flat face	vertex
surface area	parallel	irregular	curved surface	vertices
net	perpendicular	two-dimensional (2D)	edge	apex

Perimeter

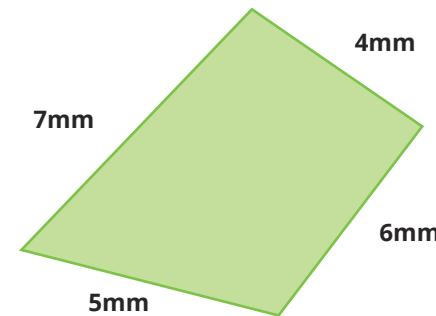
**Perimeter** is the distance all the way around the outside of a 2D shape.



To find the perimeter, you need to add together the lengths of all the sides.



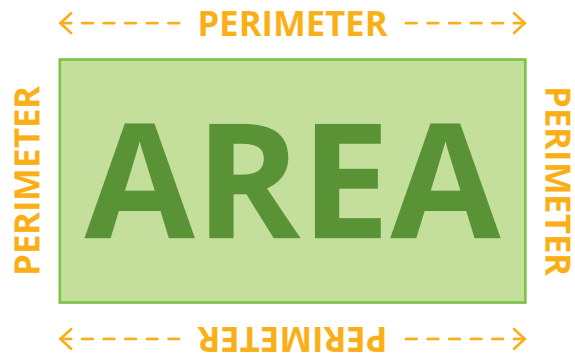
$$4\text{cm} + 3\text{cm} + 6\text{cm} = 13\text{cm}$$



$$7\text{mm} + 4\text{mm} + 6\text{mm} + 5\text{mm} = 22\text{mm}$$

**Area**

**Area** is the space inside a 2D shape. The space inside a shape is measured in square units so when calculating the area, you need to give your answer squared (²).

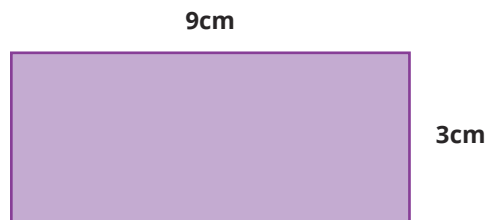


There are some formulas for calculating the area of different 2D shapes that you need to learn.

To calculate the **area** of a **rectangle**: length x width = area

$9\text{cm} \times 3\text{cm} = 27\text{cm}^2$

$a = l \times w$

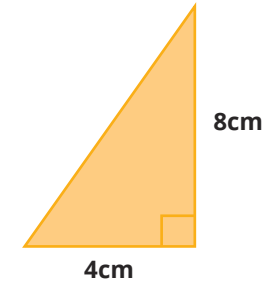


To calculate the **area** of a **triangle**:  $\frac{1}{2} \times \text{base} \times \text{vertical height} = \text{area}$

$4\text{cm} \times 8\text{cm} = 32\text{cm}$

$32\text{cm} \div 2 = 16\text{cm}^2$

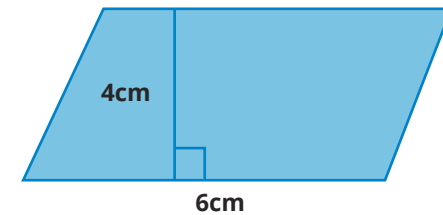
$a = \frac{1}{2} \times b \times h$



To calculate the **area** of a **parallelogram**: base x vertical height = area

$6\text{cm} \times 4\text{cm} = 24\text{cm}^2$

$a = b \times h$



To calculate the **area** of a **trapezium**: average of parallel sides x distance between them = area

$4\text{cm} + 10\text{cm} = 14\text{cm}$

$14\text{cm} \div 2 = 7\text{cm}$

$7\text{cm} \times 8\text{cm} = 56\text{cm}^2$

$a = \frac{1}{2} \times (a + b) \times h$

