Area and perimeter of shapes

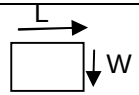
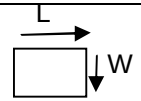
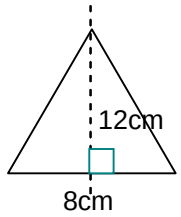
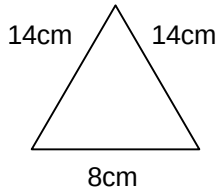
Perimeter Length around the edge of the shape (not a circle)

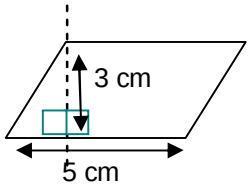
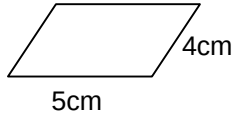
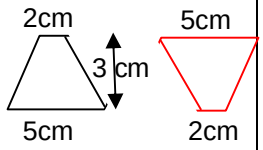
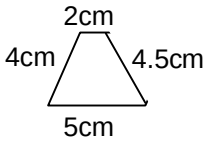
Area Space it covers (inside the shape)

measured in

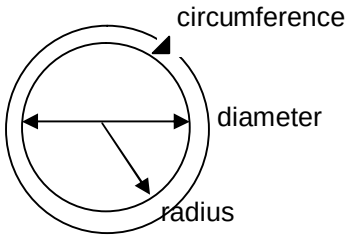
units
mm, cm, m, km

square units
mm^2, cm^2 , m^2 , km^2

Formulas for…	**Area**	**Perimeter**
Square	length x width*  *measured in square units* e.g. length = 2cm, width = 2cm: 2cm x 2cm = $4cm^2$ * *length and width measure the same for squares*	length + length + width + width  or (length x 2) + (width x 2) e.g. length = 2cm, width = 2cm: 2cm + 2cm + 2cm + 2cm = 4cm
Rectangle	length x width  *measured in square units* e.g. length = 6cm, width = 2cm: 6cm x 2cm = $12cm^2$	length + length + width + width  or (length x 2) + (width x 2) e.g. length = 6cm, width = 2cm: 6cm + 6cm + 2cm + 2cm = 16cm **Or** (6cm x 2) + (2cm x 2) = 12 + 4 = 16cm
Triangle	½ x base x height*  e.g. ½ x 8cm x 12cm: 0.5 x 8cm x 12cm = $48cm^2$ * *height must be perpendicular (at a right angle) to the base*	length + length + base  e.g. length = 14cm, length 14cm, base 8cm: 14cm + 14cm + 8cm = 36cm

Parallelogram	base x perpendicular* height e.g. base 5cm, perpendicular height 3cm 5cm x 3 cm = 15cm^2 * *cut off one triangle and fit it on the other end to make a rectangle* 	length + length + width + width e.g. length = 5cm, width = 4cm: 5cm + 5cm + 4cm + 4cm = 18cm 
Trapezium	½ x (a + b) x h e.g. a = 2cm, b = 5cm, h = 3cm ½ x (a+b) x h ½ x 7cm x 3cm = 10.5cm^2 * *two congruent (matching) trapeziums fit together to make a parallelogram* 	top + side 1 + bottom + side 2 e.g. top = 2cm, side 1 = 4.5cm, bottom = 5cm, side 2 = 4cm: 2cm + 4.5cm + 5cm + 4cm = 15.5cm 

Circumference and area of a circle



$\pi = 3.14$

			Definition:	*Represented by the letter:*	*Formula to find it:*
Circumference	*are all*	measures of length	perimeter of the circle	C	$C = \pi d$
Diameter			width of the circle	d	$2 \times r$
Radius			measure from the centre of the circle to the outside edge	r	$\frac{d}{2}$

Calculating the…

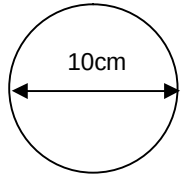
Circumference of a circle

$C = \pi d$

$= 3.14 \times 10$

$= 31.4$ cm

Top Tip!
Remember to state the units



Area of a circle

$\pi \times r \times r$ *or* πr^2

πr^2

$= 3.14 \times 3 \times 3$

$= 3.14 \times 9$

$= 28.26$ m^2