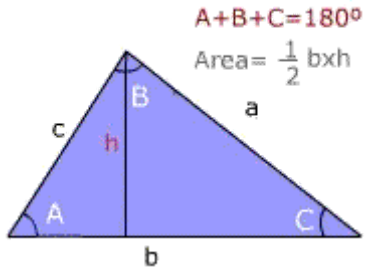
2-D SHAPES

Triangle



A **triangle** is a figure formed when three noncollinear points are connected by segments.

Each pair of segments forms an **angle** of the triangle. The vertex of each angle is a **vertex** of the triangle.

The sum of the measures of the angles of a triangle is 180.

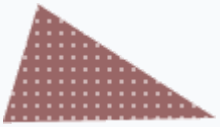
The sum of the lengths of any two sides of a triangle must be greater than the third side. That is:

$$a + b > c$$
$$a + c > b$$
$$b + c > a$$

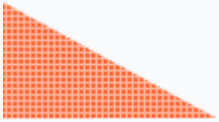
The subtraction of the lengths of any two sides of a triangle must be smaller than the third side.

Triangles can be classified by:

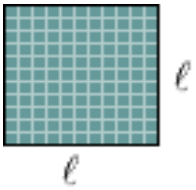
Their sides:

Equilateral	Isosceles	Scalene
		
All three sides have equal lengths	Exactly two equal sides	All sides have different lengths

Their angles:

Acute	Right	Obtuse
		
All interior angles are acute (<90º)	One angle is a right angle (90º)	One angle is obtuse (>90º)

Square



A **square** is a parallelogram with 4 congruent sides and 4 right angles.

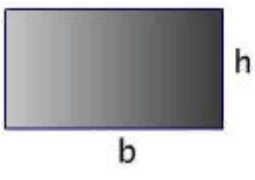
A square is a particular case of a rectangle and a rhombus simultaneously. So, it shows both the properties of rhombus and rectangle simultaneously.

Square can be differentiated from a rectangle and rhombus due to following properties:

1. Unlike rectangle square needs to have all its sides equal.

2. Unlike rhombus square needs to have all angles equal to 90 degree.

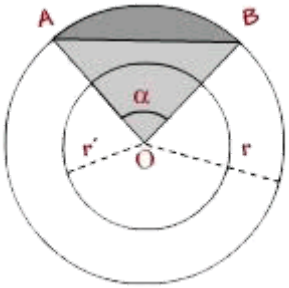
Rectangle



A rectangle is a four-sided polygon with four right angles, whose opposite sides are parallel and are equal.

A rectangle is a particular sort of parallelogram, but can't say that all parallelograms would be rectangles, because a rectangle is a shape where opposites sides are parallel and all the corners are 90 degree angles. Some parallelograms would be rectangles, but not all.

Circle



A **circle** is a plane figure, bounded by a single curve line called its**circumference**, every part of which is equally distant from a point within it, called the **center**.

A **circle sector** is any piece of the circle between two radial lines (shaded in both dark and clear grey).

A **segment of a circle** is the region between a chord of a circle and its associated arc (shaded in dark grey).

An **annulus** is the region lying between two concentric circles