

Key Vocabulary	
Face	The side of a polygon or line segment where two faces of a solid figure meet
Edge	Flat surface of a 3d shape
Vertex	A point where the edges of a solid figure meets. (A corner)
Quadrilateral	A four sided shape
Diagonal	A line joining two non-adjacent vertices or corners of a polygon
Perpendicular	Two lines meeting at a right angle
Parallel	Lines that are equidistant – the same distance apart. Never touching.
Net	A pattern that you can cut and fold to make a model of a solid shape.
Arrowhead	An arrowhead is a quadrilateral with two pairs of adjacent sides equal in length, and one of whose interior angles is a reflex angle.
Angle	Angles are the space between two lines that meet at a point, or vertex (measured in degrees).

Key facts / Diagrams		
Equilateral Triangle Has three equal sides And three equal angles	Isosceles Triangle Has two equal sides And two equal angles	Scalene Triangle Has no equal sides
Parallelogram	Square	
Rectangle	Trapezoid	
Rhombus	Kite	
Parallelogram	<ul style="list-style-type: none"> Opposite sides equal and parallel Opposite angles equal 	
Rectangle	<ul style="list-style-type: none"> Opposite sides equal and parallel All angles equal (90°) 	
Rhombus	<ul style="list-style-type: none"> Opposite sides are parallel All sides are equal Diagonals bisect each other at right angles 	
Square	<ul style="list-style-type: none"> Opposite sides equal and parallel All angles equal (90°) 	
Trapezoid	<ul style="list-style-type: none"> One pair of opposite sides are parallel 	
Kite	<ul style="list-style-type: none"> Two pairs of adjacent sides are equal Diagonals bisect at right angles 	

Common misconceptions
<ul style="list-style-type: none"> Some pupils may think that a 'regular' polygon is a 'normal' polygon Some pupils may think that all polygons have to be regular Some pupils may think that a square is only square if 'horizontal', and even that a 'non-horizontal' square is called a diamond The equal angles of an isosceles triangle are not always the 'base angles' as some pupils may think

Worked examples
<p>Using your knowledge of triangles, work out the missing angle x and y.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Answer: <ul style="list-style-type: none"> Isosceles triangle, therefore $x = 38^\circ$ Sum of interior angles in a triangle = 180° $180^\circ - (38^\circ + 38^\circ) = 104^\circ$ $y = 104^\circ$ </div> <p>Using your knowledge of the sum of angles in a triangle, work out the sum of angles in a quadrilateral.</p> <p>Draw a diagonal to help you.</p> <p>For any quadrilateral, a diagonal line divides it into two triangles. Each triangle has an angle sum of 180 degrees. Therefore the total angle sum of the quadrilateral is 360 degrees.</p>