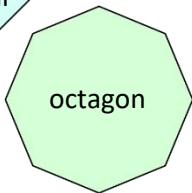
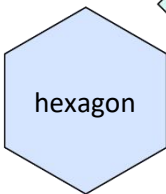
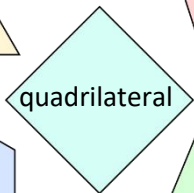
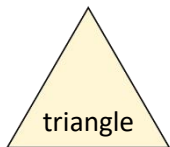


Solids and Plane Shapes

*Plane Shapes. A **polygon** is any closed 2D shape which has three or more sides. Examples are:*

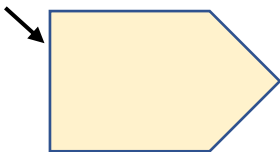












In **each** polygon above, the number of vertices, sides and angles are the same quantity unique to each shape.

All the sides and angles are equal. This property makes them **regular polygons** Eg. The Octagon has 8 sides, 8 vertices and 8 angles. The triangle has 3 sides, 3 vertices and 3 angles.

Irregular polygon:

*Not all the sides are
equal and not all the
angles are equal.*



Regular and Irregular Polygons			
Name	Regular	Irregular	Number of Sides
Triangle			3
Quadrilateral			4
Pentagon			5
Hexagon			6
Octagon			8

Properties of Quadrilaterals

Rectangle

Opposite sides equal

Opposite sides parallel

All angles right angles



Square

All sides equal

Opposite sides parallel

All angles right angles



Parallelogram

Opposite sides equal

Opposite sides parallel



Rhombus

All sides equal

Opposite sides parallel



Trapezium

Only one pair of

Opposite sides parallel



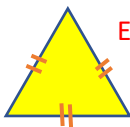
Triangles



Right angled has one angle = 90°



Isosceles has two equal sides

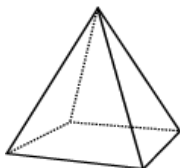
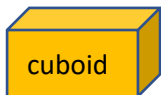


Equilateral has three equal sides



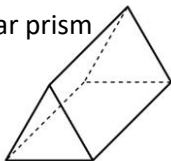
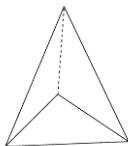
Scalene has no equal sides

Solids



Square based pyramid

Triangular prism



Triangular based pyramid

Exploring Solids

Vertex a point where 3 or more faces meet

Edge

Where 2 faces meet



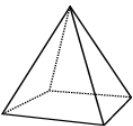
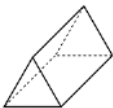
Face

Is a flat surface

A **PRISM** is a solid with uniform cross sections. The cross sections must be exactly alike in shape and size.

Examples of prisms

1. *Cuboid or rectangular prism*
2. *Cube*
3. *Cylinder*
4. *Triangular prism*



Name

Faces Edges Vertices

<i>Cuboid</i>	6	12	8
<i>Cube</i>	6	12	8
<i>Cone</i>	2	1	1
<i>Cylinder</i>	3	2	0
<i>Triangular Prism</i>	5	9	6
<i>Square Based Pyramid</i>	5	8	5