



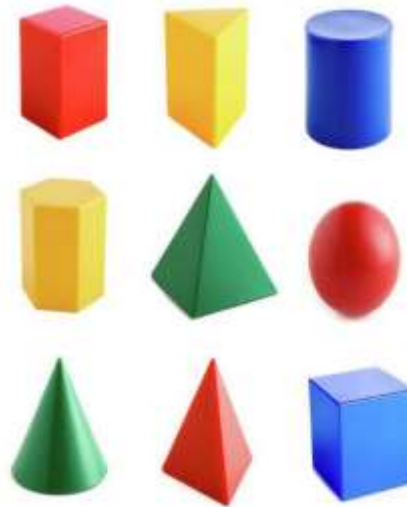
# SHAPE



## KNOWLEDGE ORGANISER

### Overview

**Shape** we learn to:



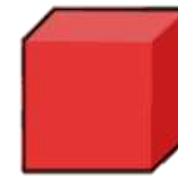
- Identify Angles -Compare and Order Angles -Quadrilaterals
- Measure Angles in Degrees -Measuring with a Protractor
- Calculating Angles on a Straight Line/Around a Point -Triangles
- Calculate Lengths & Angles -Regular/Irregular Polygons

This learning is important because...

...it helps us to understand and organise the things that we see in the world around us. Shapes help us to describe the similarities and differences between objects.

### Properties of 3-D Shapes

3-D shapes have 3 dimensions: height, width and depth. They are not flat. They have faces, vertices and edges. A face is a flat or curved surface on a 3-D shape, e.g. a cube has 6 faces.



**Cube**

- 6 flat faces
- 12 flat edges
- 8 vertices



**Cuboid**

- 6 flat faces
- 12 flat edges
- 8 vertices



**Tetrahedron**

- 4 flat faces
- 6 flat edges
- 4 vertices



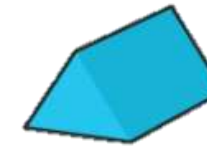
**Hexagonal Prism**

- 8 flat faces
- 18 flat edges
- 12 vertices



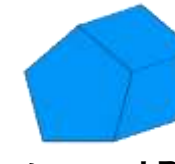
**Square-Based Pyramid**

- 5 flat faces
- 8 flat edges
- 5 vertices



**Triangular Prism**

- 5 flat faces
- 9 flat edges
- 6 vertices



**Pentagonal Prism**

- 7 flat faces
- 15 flat edges
- 10 vertices



**Octagonal Prism**

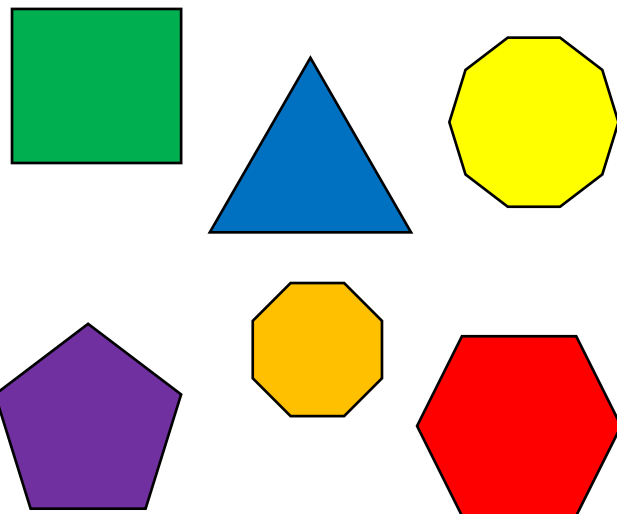
- 10 flat faces
- 24 flat edges
- 16 vertices

### Regular and Irregular Polygons

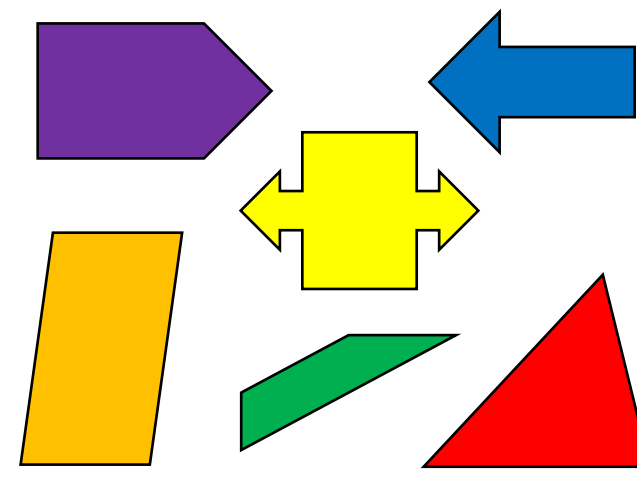
A polygon is a 2-D shape with straight sides that are fully closed.

Polygons can have any number of sides, but they must be straight (not curved).

With regular polygons, all sides and angles are equal.

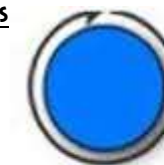


With irregular polygons, the sides and angles are not equal.



### Development of Turns and Angles

Turns



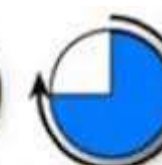
**Full turn**  
360°



**Quarter turn**  
90°

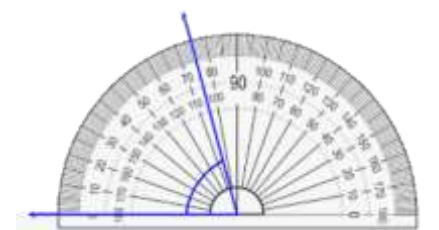


**Half turn**  
180°



**Three quarter turn**  
270°

Protractors can be used to measure the degree of angles.



Angles



**ACUTE ANGLE**  
Less than 90°



**RIGHT ANGLE**  
Exact 90°



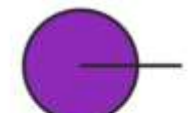
**OBTUSE ANGLE**  
Greater than 90° and less than 180°



**STRAIGHT ANGLE**  
Exact 180°



**REFLEX ANGLE**  
Greater than 180°



**FULL ANGLE**  
Exact 360°

### Key Vocabulary

Edge Apex Faces Vertices Dimension Protractor Right Angle Obtuse Acute Reflex Vertical Horizontal Diagonal Parallel Perpendicular