



# Knowledge Organiser

## Geometry



### Year 5

### Properties of Shape

Lines and angles are involved in nearly every aspect of our daily lives. In construction, angles make the difference of whether a building is safe or not. Architects need to calculate angles very precisely to create a structure which stands upright and allows rainwater to run off the roof.

#### Builds from Year 4:

Compare and classify quadrilaterals and triangles.  
Identify acute and obtuse angles.  
Compare and order angles.  
Identify lines of symmetry in 2-D shapes.

#### This year:

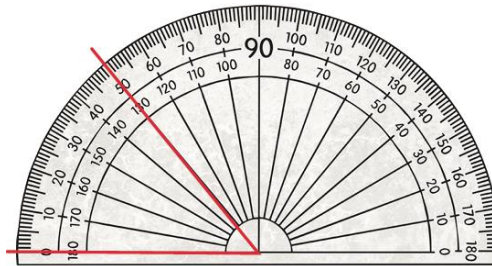
Draw angles.  
Know the number of degrees around a point and on a straight line.  
Calculate missing angles and lengths in rectangles.

#### Leads to Year 6:

Name parts of a circle.  
Draw 2D shapes with given measurements.  
Calculate missing angles in triangles and quadrilaterals.  
Describe the properties of 3D shapes.

## Measuring and Drawing Angles

When using a protractor to measure or draw angles, look carefully at how the numbers on the scale count from  $0^\circ$  to  $180^\circ$  in both directions.



## Types of Angles

Any angle that measures **less than  $90^\circ$**  is called an **acute** angle.



**acute**

Any angle that measures **greater than  $90^\circ$  and is less than  $180^\circ$**  is called an **obtuse** angle.



**obtuse**

Any angle that measures **greater than  $180^\circ$**  is called a **reflex** angle.



**reflex**

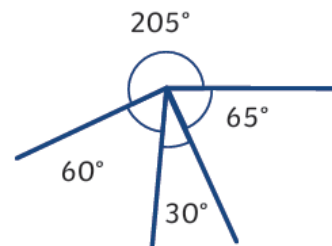
## Angles on a Straight Line

Angles on a straight line always total  **$180^\circ$** .



## Angles around a Point

Angles around a point always total  **$360^\circ$**



## Key Vocabulary

angle right angle acute obtuse reflex horizontal vertical parallel perpendicular polygon regular irregular flat/curved face edge vertex vertices radius diameter circumference apex two-dimensional three-dimensional protractor