

## What do I need to be able to do?

By the end of this unit you should be able to:

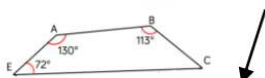
- Use letter and labelling conventions
- Draw and measure line segments and angles
- Identify parallel and perpendicular lines
- Recognise types of triangle
- Recognise types of quadrilateral
- Identify polygons
- Construct triangles (SAS, SSS, ASA)
- Draw Pie charts

## Keywords

- Polygon:** A 2D shape made with straight lines
- Scalene triangle:** a triangle with all different sides and angles
- Isosceles triangle:** a triangle with two angles the same size and two sides the same size
- Right-angled triangle:** a triangle with a right angle
- Frequency:** the number of times a data value occurs
- Sector:** part of a circle made by two radii touching the centre
- Rotation:** turn in a given direction
- Protractor:** equipment used to measure angles
- Compass:** equipment used to draw arcs and circles

## Letter and labelling convention

The letter in the middle is the angle  
The arc represents the angle

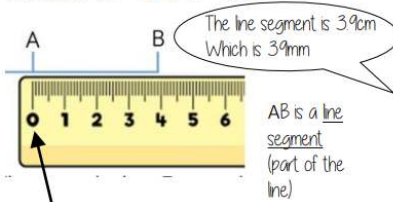


**Angle Notation:** three letters ABC  
This is the angle at B =  $113^\circ$

**Line Notation:** two letters EC  
The line that joins E to C

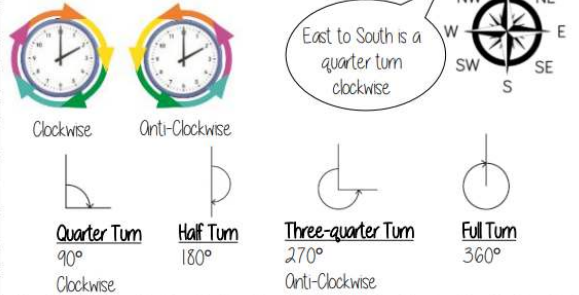
## Draw and measure line segments

Conversions  $1\text{cm} = 10\text{mm}$ ,  $1\text{m} = 1000\text{mm}$

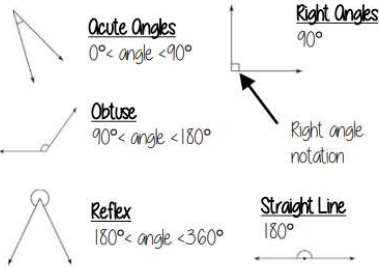


Make sure the start of the line is at 0.

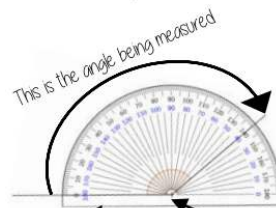
## Angles as measures of turn



## Classify angles



## Measure angles to $180^\circ$



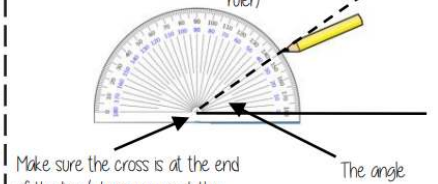
The base line follows the line segment

Make sure the cross is at the point the two lines meet

Read from  $0^\circ$  on the base line. Remember to use estimation. This is an obtuse angle so between  $90^\circ$  and  $180^\circ$

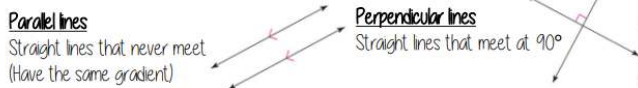
## Draw angles up to $180^\circ$

Draw a  $35^\circ$  angle. Make a mark at  $35^\circ$  with a pencil. And join to the angle point (use a ruler)



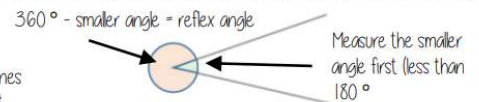
Make sure the cross is at the end of the line (where you want the angle)

## Parallel and Perpendicular lines

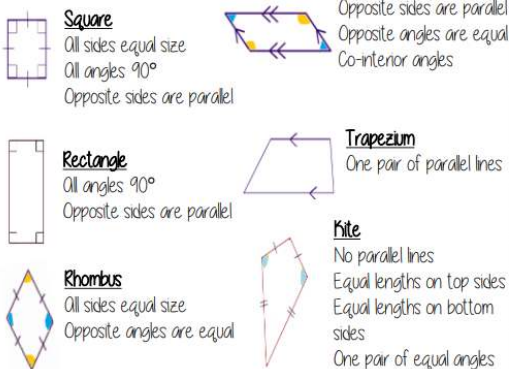


## Angles over $180^\circ$

Use your knowledge of straight lines  $180^\circ$  and angles around a point  $360^\circ$



## Properties of Quadrilaterals



## Draw Pie Charts

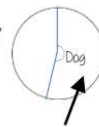
Type of pet	Dog	Cat	Hamster
Frequency	32	25	5

$\frac{32}{60}$  "32 out of 60 people had a dog"

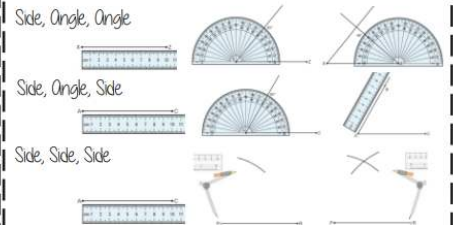
This fraction of the 360 degrees represents dogs

$\frac{32}{60} \times 360 = 192^\circ$

Use a protractor to draw. This is  $192^\circ$



## SAS, SSS, ASA constructions



If all the sides and angles are the same, it is a **regular** polygon

## Polygons

3	- Triangle	5	- Pentagon	8	- Octagon
4	- Quadrilateral	6	- Hexagon	9	- Nonagon
		7	- Heptagon	10	- Decagon