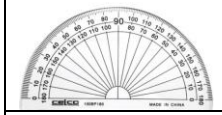
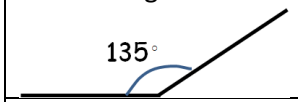
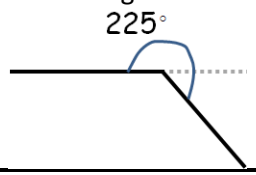
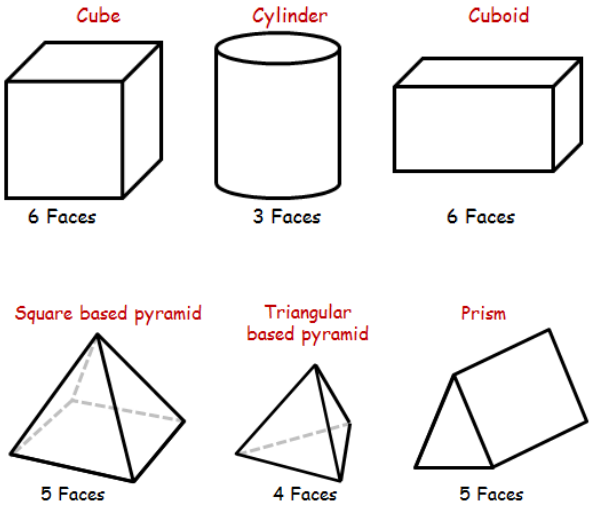
MATHEMATICS Unit 4: Visualising and constructing	Year Group: 7 set 4-5

Key Vocabulary

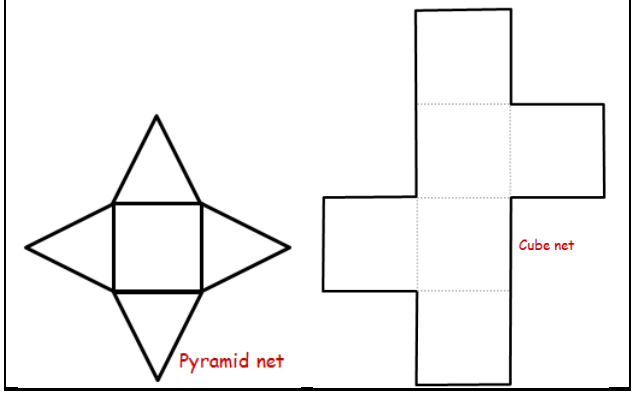
Edge	The side of a polygon or line segment where two faces of a solid figure meet
Face	Flat surface of a 3d shape
Vertex (vertices)	A point where the edges of a solid figure meets. (A corner)
Plane	A flat, 2 dimensional surface
Protractor 	An instrument used to measure angles in degrees
Measure 	The size/length of something
Construct	To draw a shape, line or angle accurately using a compass and ruler.
Obtuse Angle 	An angle bigger than 90◦ and smaller than 180◦
Reflex Angles 	An angle bigger than 180◦ and smaller than 360◦

Key facts / Diagrams

Common 3D shapes



Nets



Common misconceptions

- Some pupils will read the wrong way round the scale on a typical semi-circular protractor, therefore using 180° - required angle
- Some pupils may measure from the end of a ruler, rather than the start of the measuring scale
- Some pupils may think that several repeats of a shape in any pattern constitutes a tessellation
- When given a net of a 3D shape some pupils may think that the number of vertices of the 3D shape is found by counting the number of 'corners' on the net

Worked examples

Measuring an angle.

Place the protractor on a flat edge with the middle on the vertex (point). Measure the angle starting at 0◦ from the edge.