GCSE UNIT SUMMARY: UNIT 6: Angles, polygons and parallel lines

6a) **Properties of shapes, parallel lines and angle facts**

Unit Description	Taught	Revision Priority
Estimate sizes of angles;		
Measure angles using a protractor;		
Use geometric language appropriately;		
Use letters to identify points, lines and angles;		
Use two-letter notation for a line and three-letter notation for an angle;		
Describe angles as turns and in degrees and understand clockwise and anticlockwise;		
Know that there are 360° in a full turn, 180° in a half turn and 90° in a quarter turn;		
Identify a line perpendicular to a given line on a diagram and use their properties;		
Identify parallel lines on a diagram and use their properties;		
Find missing angles using properties of corresponding and alternate angles;		
Understand and use the angle properties of parallel lines.		
Recall the properties and definitions of special types of quadrilaterals, including symmetry properties;		
List the properties of each special type of quadrilateral, or identify (name) a given shape;		
Draw sketches of shapes;		
Classify quadrilaterals by their geometric properties and name all quadrilaterals that have a specific property;		
Identify quadrilaterals from everyday usage;		
Given some information about a shape on coordinate axes, complete the shape;		
Understand and use the angle properties of quadrilaterals;		
Use the fact that angle sum of a quadrilateral is 360°;		
Recall and use properties of angles at a point, angles at a point on a straight line, right angles, and vertically opposite angles;		
Distinguish between scalene, equilateral, isosceles and right-angled triangles;		
Derive and use the sum of angles in a triangle;		
Find a missing angle in a triangle, using the angle sum of a triangle is 180°;		
Understand and use the angle properties of triangles, use the symmetry property of isosceles triangle to show that base angles are equal;		
Use the side/angle properties of isosceles and equilateral triangles;		
Understand and use the angle properties of intersecting lines;		
Understand a proof that the exterior angle of a triangle is equal to the sum of the interior angles at the other two vertices; Use geometrical language appropriately, give reasons for angle calculations and show step-by-step deduction when solving problems.		

6b) **Interior and exterior angles of polygons**

Unit Description	Taught	Revision Priority
Recognise and name pentagons, hexagons, heptagons, octagons and decagons;		
Understand ‘regular’ and ‘irregular’ as applied to polygons;		
Use the sum of angles of irregular polygons;		
Calculate and use the sums of the interior angles of polygons;		
Calculate and use the angles of regular polygons;		
Use the sum of the interior angles of an *n*-sided polygon;		
Use the sum of the exterior angles of any polygon is 360°;		
Use the sum of the interior angle and the exterior angle is 180°;		
Identify shapes which are congruent (by eye);		
Explain why some polygons fit together and others do not;		