



Year 11 Maths Learning Journey

Spring Term 2

Reasoning: Geometric Reasoning

Core knowledge	Reference
Angles in parallel lines and shapes (R) “What is meant by alternate & corresponding?”	Worksheet
Exterior and interior angles of polygons (R) “What does it mean for a polygon to be regular?”	Worksheet
Proving geometric facts “How do you know if a triangle is isosceles?”	Worksheet
Solve problems involving vectors (R) “How do vectors represent transformations?”	Worksheet
Review of circle theorems (H) (R) “How can you use angles at the centre and circumference to prove that the angle in a semi-circle is 90 degrees?”	Worksheet
Circle theorem - angle between radius and chord (H) “What is a perpendicular bisector?”	Worksheet
Circle theorem - angle between radius and tangent (H) “What is the angle between a radius and a tangent?”	Worksheet
Circle theorem - two tangents from a point (H) “What can we say about two tangents that originate from the same point?”	Worksheet
Circle theorem - alternate segment theorem (H) “What is meant by the alternate segment?”	Worksheet
Review Pythagoras' theorem and using trigonometric ratios (R) “How do you know when to apply Pythagoras and when to apply trigonometry?”	Worksheet

Learning Checkpoints

LC Title	Completed	Dirt
Geometric Reasoning		

Key Vocabulary:

Angle – Measure of turn.

Adjacent – Next to one another.

Parallel – Travelling in the same direction.

Corresponding – Analogous in form or character.

Alternate – Opposite in form or character.

Interior – Located on the inside.

Exterior – Located on the outside.

Equilateral – Having equal angles and sides.

Isosceles – Having one pair of equal sides & angles.

Vector – Quantity with a magnitude & a direction.

Cyclic Quadrilateral – Quadrilateral with all four corners touching the circumference of a circle.

Bisects – Cuts in half.

Chord – Line connecting one part of the circumference to another.

Tangent – Straight line which touches a curve in one place.

Segment – Area bound by an arc and a chord.