

## Year 9 Mathematics Set 1 to 4

### Learning Programme 4

<p>The LORIC skill focus for this LP is: INITIATIVE.</p> <p>The Moral Virtues focus for this LP are: INTEGRITY and GRATITUDE.</p> <p>Integrity - Having strong moral principles.</p> <p>Gratitude - Feeling and expressing thanks.</p> <p><b>What will I be learning about in this Learning Programme?</b> In LP4 I will be learning about angles made by parallel lines and in polygons, solve problems with Pythagoras' Theorem and transformations of 2D shapes.</p> <p><b>Where have I seen this learning before?</b> Year 8: angles in parallel lines, interior and exterior angles of polygons, recognise a line of symmetry, reflect a shape in a given line, working with square numbers.</p> <p><b>What could I use it for?</b> The knowledge and skills I will learn in this learning programme will allow me to Use chains of reasoning to find unknown angles, Identify and apply Pythagoras' theorem and solve geometrical problems involving polygons and complete and describe a series of transformations.</p>	<p><b>Literacy:</b></p> <ul style="list-style-type: none"> <li>• Capital letters must be used at the start of sentences and for the first letter of proper nouns</li> <li>• Full stops must be used at the end of a sentence</li> <li>• Question marks must be used at the end of a question</li> <li>• Apostrophes should only be used for possession or omission</li> <li>• Days of the week and months must be spelled correctly</li> <li>• Key words must be spelled correctly</li> </ul>
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In LP4.1, I will know:	04/03/24 - (WK 1)	Key Vocabulary	Homework
how to solve problems with angles made by parallel lines; how to solve problems with angles in polygons.		Co-interior	LP3 consolidation Sparx Maths
In LP4.2, I will know:	11/03/24 - (WK 2)	Key Vocabulary	Homework
how to solve angles problems and give reasons; how to solve angle problems with algebra.		Corresponding	LP4:1 Topics plus consolidation Sparx Maths
In LP4.3, I will know:	18/03/24 - (WK 1)	Key Vocabulary	Homework
how to form conjectures with angles; how to form conjectures with shapes.		Conjecture	LP4:2 Topics plus consolidation Sparx Maths
Extended Task.			
In LP4.4, I will know:	25/03/24 - (WK 2)	Key Vocabulary	Homework
how to identify the order of rotational symmetry of a shape; how to compare and contrast rotational symmetry with line symmetry; how to rotate a shape about a point on a shape.		Symmetrical	LP4:3 Topics plus consolidation Sparx Maths
In LP4.5, I will know:	15/04/24 - (WK 1)	Key Vocabulary	Homework
how to rotate a shape about a point; how to translate points and shapes by a given vector; how to compare rotation and reflection of shapes.		Transformation	LP4:4 Topics plus consolidation Sparx Maths
In LP4.6, I will know:	22/04/24 - (WK 2)	Key Vocabulary	Homework
how to identify the hypotenuse of a right-angled triangle; how to determine whether a triangle is right angled.		Hypotenuse	LP4:5 Topics plus consolidation Sparx Maths
Extended Task.			
In LP4.7, I will know:	29/04/24 - (WK 1)	Key Vocabulary	Homework
how to calculate the hypotenuse of a right-angled triangle; how to calculate missing sides in right-angled triangles.		Adjacent	LP4:6 Topics plus consolidation Sparx Maths
In LP4.8, I will know:	06/05/24 - (WK 2)	Key Vocabulary	Homework
how to use Pythagoras' theorem on coordinate axes; how to form proofs of Pythagoras' theorem.		Proof	LP4:7 Topics plus consolidation Sparx Maths

PRT Task 1

PRT Task 2

**Resources to support learning:**  
Pupils have access to knowledge organisers, Mathswatch and Sparx Maths to further support them in their Mathematics revision beyond the classroom. All weekly homework tasks will be set on Sparx Maths and all questions have a video to support. Pupils can access any topic in the Independent Practice section on Sparx Maths. Sparx Maths has been introduced to the pupils by their teachers and their login details should be written in their planner.

**FFET Award Challenge for this Learning Programme:**  
Complete 4 XP Boost Tasks on Sparx Maths