

Year 11 Higher Mathematics

Learning Programme 1

The LORIC skill focus for this LP is: LEADERSHIP The Moral Virtues focus for this LP are: COURAGE and HUMILITY. Courage - Acting with bravery and overcoming fears. Humility - Having a modest view of oneself. What will I be learning about in this Learning Programme? In LP1 I will be learning about equations of linear graphs, parallel and perpendicular lines, quadratic graphs, cubic, reciprocal and exponential graphs, gradient of graphs, area under a graph, manipulating expressions and solving linear and quadratic equations. Where have I seen this learning before? Year 10: equations of linear graphs, solving linear simultaneous equations, plotting quadratic graphs, solve quadratic equations. What could I use it for? The knowledge and skills I will learn in this learning programme will allow me to interpret real life functions and graphs of situations such as the exponential growth and decay in financial situations.			Literacy: - Capital letters must be used at the start of sentences and for the first letter of proper nouns - Full stops must be used at the end of a sentence - Question marks must be used at the end of a question - Apostrophes should only be used for possession or omission - Days of the week and months must be spelled correctly - Key words must be spelled correctly
In LP1.1, I will know: how to work with the laws of indices; how to use fractional and negative indices; how to solve problems involving standard form.	31/08/26 - (WK 1)	Frayer Model Words Index	Homework Yr10 consolidation Sparx Maths
In LP1.2, I will know: how to form and solve linear equations including those with unknowns on both sides, brackets and fractional terms; how to form and solve linear inequalities including those with unknowns on both sides, brackets and fractional terms; how to change the subject of a formula.	07/09/26 - (WK 2)	Frayer Model Words Linear	Homework LP1:1 Topics plus consolidation Sparx Maths
In LP1.3, I will know: how to factorise quadratic expressions; how to solve quadratic equations by factorisation; how to solve quadratics using the quadratic formula. Extended Task.	14/09/26 - (WK 1)	Frayer Model Words Quadratic	Homework LP1:2 Topics plus consolidation Sparx Maths
In LP1.4, I will know: how to find the equations of parallel lines; how to find the equations of perpendicular lines.	21/09/26 - (WK 2)	Frayer Model Words Perpendicular	Homework LP1:3 Topics plus consolidation Sparx Maths
In LP1.5, I will know: how to plot and interpret quadratic graphs; how to plot and interpret cubic graphs; how to plot and interpret reciprocal graphs.	28/09/26 - (WK 1)	Frayer Model Words Reciprocal	Homework LP1:4 Topics plus consolidation Sparx Maths
In LP1.6, I will know: how to interpret distance-time and speed-time graphs; how to find the gradient of a curve at a given point; how to estimate the area under a curve. Extended Task.	05/10/26 - (WK 2)	Frayer Model Words Gradient	Homework LP1:5 Topics plus consolidation Sparx Maths
In LP1.7, I will know: how to add and subtract with algebraic fractions; how to multiply and divide with algebraic fractions; how to solve equations with algebraic fractions.	12/10/26 - (WK 1)	Frayer Model Words Algebraic	Homework LP1:6 Topics plus consolidation Sparx Maths
Resources to support learning: Pupils have access to knowledge organisers 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. They can simply search the following topics: linear graphs, parallel and perpendicular lines, quadratic graphs, cubic, reciprocal and exponential graphs, gradient of graphs, area under a graph, manipulating expressions and solving linear and quadratic equations. 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: Construct an accurate hexagon using equilateral triangles. Only use a pair of compasses and a ruler. For an added challenge produce a tessellation pattern using constructed hexagons.			

PRT Task 1

PRT Task 2