

# Year 10

In year 10 students will follow one of two paths, either foundation or higher. There is the opportunity for students to swap between tiers into year 11 dependent on performance. Students now receive nine lessons over a two-week period

## Year 10 scheme of learning

### Foundation Stream

Unit Detail	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Title</b>	<b>Non Calculator methods</b>	<b>Similarity and congruence</b>	<b>Proportions</b>	<b>Delving into data</b>	<b>Developing algebra</b>	<b>2D and 3D shapes</b>
<b>STREAM</b>	<b>Foundation (3,4,5)</b>	<b>Foundation (3,4,5)</b>	<b>Foundation (3,4,5)</b>	<b>Foundation (3,4,5)</b>	<b>Foundation (3,4,5)</b>	<b>Foundation (3,4,5)</b>
<b>Content A</b>	prime factorisation	Understand the difference between similarity and congruence	Use ratio's including with mixed units	Understand sampling and possible limitations	Solve equations with unknowns on both sides	Review area and circumference
	Addition and subtraction of fractions	Enlarge a shape about a given points	Fractions in ratios	and interpret tables and line graphs for time s	Solve complex equations	Name parts of circles and perform related calculations
	Multiplication of fractions	Understand and use similarity	Fractions from ratios	Understand and represent grouped data	Form and solve equations	Find volumes related to circles
	Four operations with mixed fractions	Find missing sides in similar shapes including pairs of similar triangles	Combining ratios	Understand and identify correlation	Solve inequalities	Find the volume of cubes, cuboids
	Contextual fraction calculations	Understand and use the conditions for a pair of congruent triangles	Unit pricing (best buys)	Use lines of best fit, understand extrapolation	Form and solve inequalties	Find the area of a sector
	Work with exact answers	Bearings	Currency conversion	Construct and interpret frequency polygons	Represent solutions to an inequality	find the arc length
	Recognise arithmetic and geometric sequences		Direct proportion problems	Evaluate measures of location and dispersion	Represent solutions graphically	Find surface area of 3D shapes
	Recognise and use other sequences (Quadratics - substituting into one only)		Inverse proportion problems	Pie charts (drawing and interpreting)		
	Calculate with decimals in context		Work with compound units	Working with the mean		
Find limits of accuracy			Stem and leaf diagrams			
<b>Title</b>	<b><u>Using Number</u></b>	<b>Right angle triangles</b>	<b><u>Money and interest</u></b>	<b><u>Probability</u></b>	<b><u>Further equations</u></b>	<b><u>Locations</u></b>
	Work out powers and roots	Revisit pythagoras	Convert FDP	theoretical and experimental probability	Understand the meaning of solution, appreciating that some equations have more than one solution	Review and use all angle rules
<b>Content B</b>	Use the rule of indices	Understand and use trigonometric ratios	percentages and percentage change	frequency trees and tables	Solve a pair of simultaneous equations	Understand and use bearings
	Add and subtract with standard form	Work out missing lengths in right angled triangles	one number as a percentage of another	Summing probabilities to 1	Solve simultaneous equations graphically	Understand vector notation
	Multiply and divide with standard form	Work out missing angles in right angled triangles	Calculate simple and compound interest	Relative frequency	solve a pair of simultaneous equations	Vector arithmetic - addition, subtraction and multiplication by a scalar
	Contextual calculations with standard form		Evaluate exponential change	Set notation		Vectors and translations
	Know and use negative index laws		Reverse percentages	Venn diagrams		Review constructions
				Probability from venn diagrams		Review Loci
			Mutually exclusive events			

## Higher Stream

Unit Detail	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Title</b>	<b>Non calculator methods</b>	<b>Similarity and congruence</b>	<b>Proportions</b>	<b>Delving into data</b>	<b>Developing algebra</b>	<b>2D and 3D shapes</b>
<b>STREAM</b>	<b>Higher (1,2)</b>	<b>Higher (1,2)</b>	<b>Higher (1,2)</b>	<b>Higher (1,2)</b>	<b>Higher (1,2)</b>	<b>Higher (1,2)</b>
<b>Content A</b>	Four operations with fractions	Similarity and congruence	Combining ratios	Understand sampling and possible limitations	Solve equations with unknowns on both sides	Review area and circumference
	Contextual fraction calculations	Find missing sides in similar triangles	Best buys and currency conversion	Construct and interpret tables and line graphs for time series data	Solve complex equations	Name parts of circles and perform related calculations
	Work with exact answers	Area and volume of similar shapes	Direct and inverse proportion problems	Understand and represent grouped data	Form and solve equations	Find volumes related to circles
	Recognise arithmetic and geometric sequences	Formal proof of congruency of triangles	Direct proportion equations	Understand and identify correlation	Solve inequalities	Find the volume of cubes, cuboids
	Recognise other sequences	Enlarge a shape by fractional and negative scale factors	Inverse proportion equations	Use lines of best fit, understand the extrapolation	Form and solve inequalities	Find the area of a sector
	Find the nth term of a quadratic sequence	Bearings	Work with compound units	Construct and interpret frequency polygons	Represent solutions to an inequality on a number line	Find the arc length
	Find limits of accuracy			Evaluate measures of location and dispersion	Represent solutions graphically	Find sector area utilising $\frac{1}{2}ab\sin C$
	Find upper and lower bounds			Pie charts (drawing and interpreting)	Solve inequalities in two variables	Equation of a circle
	Calculate with bounds			Working with the mean	Solve quadratic equations and inequalities	
Work with rational and irrational numbers including recurring decimals			Construct and interpret cumulative frequency diagrams, box plots and histograms	Quadratic formula		
<b>Title</b>	<b>Using Number</b>	<b>Right angle triangles</b>	<b>Money and interest</b>	<b>Probability</b>	<b>Further equations</b>	<b>Locations</b>
	Calculate with standard form	Revisit pythagoras (extend into 3D)	percentages and percentage change	Compare theoretical and experimental probability	Understand the meaning of solution, appreciating that some equations have more than one solution	Review and use all angle rules
<b>Content B</b>	Understand and use fractional indices	Understand and use trigonometric ratios	Find one number as a percentage of another	Find probabilities from frequency trees and tables	Solve a pair of simultaneous equations	Understand and use bearings
	Understand and use negative indices	Work out missing lengths in right angled triangles	Calculate simple and compound interest	Summing probabilities to 1	Solve simultaneous equations graphically	Understand vector notation
	Calculate with surds	Work out missing angles in right angled triangles	Evaluate exponential change	Relative frequency	Form and solve a pair of simultaneous equations	Vector arithmetic - addition, subtraction and multiplication by a scalar
	Rationalize a surd	exact values of key angles	Reverse percentages	Set notation	Solve simultaneous equations with one linear and one quadratic	Vectors and translations
		Use trigonometry in 3D shapes	Interpret gradients of straight line graphs	Venn diagrams		Algebraic vectors
		Use the sine and cosine rules	Area under a graph	Probability from venn diagrams		Work with ratios and vectors
				Mutually exclusive events		Use vectors to form proofs
			Probability trees (dependent, independent)			

Homework in year 10 is on Hegarty Maths