

Stage 11F		
Topics		
Half Term 1	Constructions Stage 9 / 10F	Use the standard ruler and compass constructions - perpendicular bisector of a line segment - constructing a perpendicular to a given line from a given point - bisecting a given angle Know that the perpendicular distance from a point to a line is the shortest distance to the line
	Pythagoras 1 : Foundation	Pythagoras in 2D only Find a long or short side Test if a triangle is right angled Solve basic Problems in volving Pythagoras
	Trigonometry 1 GCSE Foundation	Use a calculator to find the sine, cosine and tangent of an angle Know the trigonometric ratios, $\sin\theta = \text{opp/hyp}$ , $\cos\theta = \text{adj/hyp}$ , $\tan\theta = \text{opp/adj}$ Set up and solve a trigonometric equation to find a missing side in a right-angled triangle Set up and solve a trigonometric equation to find a missing angle in a right-angled triangle Use trigonometry to solve problems involving bearings Use trigonometry to solve problems involving an angle of depression or an angle of elevation
	Similarity & Congruence 1	Know the criteria for triangles to be congruent (SSS, SAS, ASA, RHS) Identify congruent triangles Know that AAA shows triangles are similar Understand the idea of Scale Factor Prove 2 triangles are Congruent Represent Scale factors as ratios
	Statistics Stage 11 : Scatter Graphs	Plot a scatter diagram of bi-variate data Understand Positive, Negative and No Correlation. Understand Weak and Strong Correlation Understand Interpolation and Extrapolation and the limitations. Draw on a line of best fit.
Half Term 2	Algebra 1: Two Brackets	Understand the meaning of an identity Multiply two linear expressions of the form $(x + a)(x + b)$ Expand the expression $(x \pm a)^2$ Factorise a quadratic expression of the form $x^2 + bx + c$ Solve a quadratic equation of the form $x^2 + bx + c = 0$ Know and recognise the difference of 2 squares Know and recognise a Perfect Square e.g. $(x+3)^2 = x^2+6x+9$
	Direct and Inverse Proportion	Understand and apply Direct Proportion Understand and apply Inverse Proportion Recognise and Draw (sketch) the graphs corresponding to direct and inverse proportion
	Inequalities	Choose the correct inequality symbol for a particular situation Find the set of integers that are solutions to an inequality Use a formal method to solve an inequality Use a formal method to solve an inequality with unknowns on both sides Know how to deal with negative number terms in an inequality Know when to use an open / closed circles at the end of a range of values shown on a number line
	Simultaneous Equations	Solve two linear simultaneous equations algebraically Find approximate solutions using a graph Translate simple situations into algebraic expressions or formulae.
Half Term 3	Trigonometry 2	Use a calculator to find the sine, cosine and tangent of an angle Set up and solve a trigonometric equation to find a missing side in a right-angled triangle Set up and solve a trigonometric equation when the unknown is in the denominator of a fraction Set up and solve a trigonometric equation to find a missing angle in a right-angled triangle Use trigonometry to solve problems involving bearings Use trigonometry to solve problems involving an angle of depression or an angle of elevation Establish the exact values of $\sin\theta$ and $\cos\theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ$ and $90^\circ$ Establish the exact value of $\tan\theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ$ and $60^\circ$
	Vectors	Be able to draw position vector on a grid Multiply a Vector by a scalar Add and Subtract vectors and draw the resultant Solve basic Vector Geometry problems
	Revision	Revision