Student Course Evaluation Form		
Algebraic Skills		
Topic	Description	Evaluation
Algebraic Expressions involving expansion of brackets	• Collect like terms • Use distributive law • Multiplying pairs of (or three) brackets • Multiplying a binomial and trinomial expression	
Factorising Algebraic Expressions	• Factorise by finding a common factor • Factorise using a difference of 2 squares • Factorise a trinomial expression	
Completing the Square in a quadratic expression with a unitary x^2 term	• Complete the square to write a trinomial in the form $(x +a)^2 + b$	
Reducing an algebraic fraction to its simplest form	• Using factorising to simplify an algebraic fraction involving multiplication • Simplify complex algebraic fractions involving multiplication • Simplify complex algebraic fractions using a negative common factor	
Applying one of the four operations to algebraic fractions	• Adding and subtracting algebraic fractions with one or more terms on the numerator or denominator • Multiplying and dividing algebraic fractions with one or more terms on the numerator or denominator	
Determine the equation of a straight line	• Use $y = mx + c$, $y - b = m(x - a)$ or equivalent to find the equation of a straight line given 2 points or one point and the gradient • Use and apply functional notation • Identify the gradient and y- intercept from various forms of the straight line	
Working with linear equations and inequalities	• Solve linear equations using brackets • Solve linear equations using fractions • Solve complex inequalities	
Working with simultaneous equations	• Solve equations graphically • Solve equations algebraically • Create from text and solve	
Changing the subject of the formula	• Change the subject of a simple linear formula using brackets or fractions • Change the subject of a formula containing a simple square or square root.	

Topic	Description	Evaluation
Recognise and determine the equation of a quadratic function from its graph	• Recognise and determine equation of the form $y = kx^2$ • Recognise and determine equation of the form $y = (x + a)^2 + b$	
Sketching a quadratic function	• Sketch the graph of a quadratic function in factorised form • Sketch the graph a quadratic function in the form $y = (x + a)^2 + b$	
Identifying features of a quadratic function in the form $y = (x + a)^2 + b$	• Identify the nature and coordinates of the turning point • Identify the equation of the axis of symmetry	
Solving a quadratic equation	• Solving from factorised form • Solving after factorising • Solving graphically	
Solving a quadratic equation using the quadratic formula	• Solve using the quadratic formula	
Using the discriminant to determine the number and nature of roots	• Know and use the discriminant • Determine the number and clearly describe the nature of roots using the language "two real and distinct roots"; "two real and equal roots"; "one real repeated root" ; "no real roots"	

Numerical Skills		
Topic	Description	Evaluation
Surds	• Identifying and simplifying surds through the 4 operations • Calculating and manipulating surds • Rationalising a denominator	
Simplifying expressions using Laws of Indices	• Writing and using index notation • Simplifying and evaluating expressions using laws of indices • Calculations using scientific notation	
Rounding	• Rounding to a given number of significant figures	
Working with Fractions and Percentages	• Working with reverse percentages to calculate an original quantity • Working with appreciation and depreciation using the multiplier method. • Operations and combination of operations (BODMAS) using fractions including mixed numbers	

Statistical Skills		
Comparing data sets using statistics	• Calculating semi-interquartile range • Calculating standard deviation	
Forming a linear model from a given set of data	• Determine the equation of the line of best fit from a scatter graph and use it to calculate y given a value for x.	

Geometric Skills		
Topic	Description	Evaluation
Applying Pythagoras' Theorem	• Applying Pythagoras' Theorem in complex situations including converse and 3D.	
Determine the gradient of a straight line given 2 points	• Use the gradient formula $m = \frac{y_2 - y_1}{x_2 - x_1}$	
Calculate the volume of a standard solid	• Calculate the volume of a cone, a sphere and a pyramid. • Sketch the graph a quadratic function in the form $y = (x + a)^2 + b$	
Similarity	• Using the inter relationship between scalar lengths and area & volume of mathematically similar shapes	
Circle Geometry	• Calculating the length of an arc • Calculating the area of a sector	
Applying properties of shapes to calculate an angle using at least 2 steps	• Shapes used may be quadrilaterals, polygons, circles and triangles • Relationship in a circle between the centre, chord and perp. bisector	
Working with 2D and 3D vectors	• Adding or subtracting 2D vectors using directed line segments • Determine the coordinates of a point from a diagram showing a 3D object.	
Using vector components	• Adding or subtracting 2 or 3 dimensional vectors using components	
Calculating the magnitude of a vector	• Magnitude of a 2 or 3 dimensional vector	
Trigonometric Skills		
Topic	Description	Evaluation
Working with the graphs of trigonometric functions	• Basic graphs and amplitude • Vertical translation • Multiple angle and phase angle	
Working with Trigonometric relationships in degrees	• Sine, Cosine and Tangent of angles from 0° to 360° • Related angles • Period of graph • Solving basic equations (CAST) • Using the identities $\text{Tan } x° = \frac{Sin\, x°}{Cos\, x°}$ and $Sin^2 x° + Cos^2 x° = 1$	
Calculate the area of a triangle by using trig.	• Use the formula Area = ½ abSinC°	
Use the Sine or Cosine rules to find the side or angle in a non-right angled triangle.	• Use the Sine rule to calculate a side or an angle • Use the cosine rule to calculate a side or an angle	
Use bearings with trigonometry	• Using basic angle facts and trigonometry to calculate a distance or direction.	