Algebraic Skills	
Topic	Description
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.
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"