



# Solving Equations

- Section 1 – Starting Equations
- Section 2 - Algebraic Expressions
- Section 3 – Linear Equations
- Section 4 – Quadratic Equations
- Section 5 - Polynomial Equations
- Section 6 - Systems of Linear Equations
- Section 7 – Inequations

## Section 1 – Starting Equations

- What are Equations?
- Overview of Solving Equations

## Section 2 - Algebraic Expressions

- Components of an Equation
- Simplifying Algebraic Expressions
- Working with Parentheses
- Factorising Using a Common Factor
- Factorising a Trinomial
- Factorising as a Difference of Two Squares

## Section 3 – Linear Equations

- Solving Linear Equations
- Solving Equations with Parentheses
- Solving Equations with Fractions

## Section 4 – Quadratic Equations

- Solving Quadratic Equations by Factorising – Common Factor
- Solving Quadratic Equations by Factorising – Trinomials
- Solving Quadratic Equations by Factorising – Difference of Squares
- Solving Quadratic Equations using the Quadratic Formula
- The Discriminant for Quadratic Equations
- Graphical Interpretation of Quadratic Equations



## **Section 5 - Polynomial Equations**

Adding and Subtracting Polynomial Expressions  
Multiplying Polynomial Expressions by a Scalar  
Polynomial Factors  
Factorising using Synthetic Division with a Given Factor  
Factorising using Synthetic Division Without a Given Factor  
Starting Polynomial Equations  
Solving Polynomial Equations Already Factorised  
Solving Polynomial Equations Not Factorised  
Graphical Interpretation of Polynomial Equations

## **Section 6 - Systems of Linear Equations**

Solving by Elimination of a Variable  
Solving More Complex Systems of Linear Equations  
Solving by Substitution  
Estimating Solutions Using a Graphical Approach

## **Section 7 – Inequations**

Solving Inequations  
Solving Inequations – Multiplying or Dividing by a Negative