Algebra
Checklist

Use this alongside our Walkthrough Guides to tick off the concepts you're confident with to plan your study and find areas of improvement!

Algebra Basics

- ○ I can add values of *x*
- ○ I can remember that 1x is the same as *x*
- ○ I can multiply the numbers in front of *x*

- ○ I can multiply values of *x*
- ○ I can divide values of *x* by cancelling out
- ○ I can rearrange and solve an equation

Expanding and Factorising

- ○ I can explain the difference between expanded and factorised form
- ○ I can factorise by finding the common factor
- ○ I can rearrange to make *x* the subject of an equation
- ○ I can gather like terms

- ○ I can isolate *x* by factorising
- ○ I can factorise a quadratic
- ○ I can factorise a quadratic with negative signs
- ○ I can factorise a quadratic with a coefficient bigger than 1 in two ways
- ○ I can expand cubic equations

Algebraic Fractions

- ◯ I can simplify fractions by cancelling out
- ◯ I can identify when a fraction can or can't be cancelled out
- ◯ I can divide fractions by other fractions
- ◯ I can multiply fractions by other fractions

- ◯ I can simplify fractions where x has a power greater than 1
- ◯ I can add fractions
- ◯ I can subtract fractions
- ◯ I can cross-multiply two fractions

Exponents and Logarithms

- ◯ I can identify the parts of an exponential equation
- ◯ I can explain what exponential equations model
- ◯ I can convert exponential equations to log equations
- ◯ I can identify parts of the log equation
- ◯ I can remember the rule when switching from exponential to log equations

- ◯ I can add logs
- ◯ I can subtract logs
- ◯ I can use powers with logs
- ◯ I can simplify into one term
- ◯ I can take the log of both sides to solve a problem when the power is x
- ◯ I can solve log equations using a calculator
- ◯ I can solve log equations with complicated powers or bases

Algebraic Fractions

- ○ I can solve a quadratic by making it equal to zero and finding *x*
- ○ I can solve a quadratic by completing the square
- ○ I can solve a quadratic using the quadratic formula
- ○ I can explain what roots are and how an equation can have one, two, or no roots
- ○ I can use the discriminant to find the nature of roots

- ○ I can find the roots of an equation that has an unknown, like k
- ○ I can find a range of values for when an equation has two, one, or no roots
- ○ I can solve polynomials in factorised form