Foxford Learning Plan

Maths Year 11 Intermediate
Autumn term

Percentages, Quadratic equations, Indices, Surds, Recurring decimals, Functions, Algebraic fractions, Data.

Key Vocabulary

Compound interest	When the interest rate increases exponentially
Quadratic equations	An equation containing a single variable of degree 2. Its general form is ax2 + bx + c = 0, where x is the variable and a, b, and c are constants (a ≠ 0)
Expand	Expanding brackets means multiplying the terms to remove the brackets
Factorise	The reverse of expanding – putting an expression into brackets using factors
Indices	An index is a small number that tells us how many times a term has been multiplied by itself. The plural of index is indices
Surds	A surd is an expression that includes a square root, cube root or other root symbol. Surds are used to write irrational numbers precisely
Recurring decimal	A decimal fraction in which a figure or group of figures is repeated indefinitely, as in *0.666 …* or as in *1.851851851*
Simultaneous equation	Equations involving two or more unknowns that are to have the same values in each equation.
Subject of a formula	The variable that is being worked out (it can be recognised as the letter on its own on one side of the equals sign)
Iteration	To repeatedly carry out a process
Mean	The average of a set of values (calculated by dividing the sum of a set of values by the number of values in the set)
Cumulative frequency	The total of frequencies that are distributed over different class intervals

Key Terms

Over the course of the term, I will be able to: -
Calculate percentage change and reverse percentages
Calculate compound interest/depreciation and repeated percentage change
Expand and factorise quadratic expressions
Solve quadratic equations by factorising and using the quadratic formula
Expand triple brackets
Evaluate indices including negative and fractional powers
Calculate with numbers written in standard form
Expand, simplify and rationalise surds
Convert recurring decimals into fractions
Form and solve linear equations
Solve simultaneous equations
Change the subject of complex formulae
Solve equations by applying iteration
Calculate with basic functions
Simplify and calculate with algebraic fractions
Apply algebraic proof to problems
Calculate the mean from a frequency table (including grouped)
Draw and interpret cumulative frequency diagrams
Draw and interpret box plots
Draw and interpret histograms