Foxford Learning Plan

Maths YEAR 10 Higher – Autumn

Indices, surds, recurring decimals, ratio and proportion quadratic sequences quadratic and simultaneous equations

Key Vocabulary

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
Factorise	Finding what to multiply to get an expression by means of a bracket. Example: 2y+6 = 2(y+3),
Expand	Expanding brackets means multiplying each term in the brackets by the expression outside the brackets.
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
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)
Two-way tables	A two-way table is a way to display frequencies or relative frequencies for two categorical variables. One category is represented by rows and a second category is represented by columns.
Grouped frequency	A description of how often a set of specific responses, organized into equal-sized subsets of possible responses, occur in a sample.
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.

Key Skills

Over the course of the term, I will be able to: -
Solve Number Problems - Combinations
Manipulate Indices -Zero, Negative and Fractional
Simplify Surds
Expanding and Rationalising Surds
Convert Recurring Decimals to fractions
Solve Ratio and Proportion problems
Calculate with Direct Proportion
Solve Further Direct Proportion
Calculate Inverse Proportion
Find Nth Term Quadratic
Expand Factorise Quadratics
Solving equations - Brackets and x's both sides
Change the subject of a formula
Solve Quadratic equations
Use Quadratic Formula
Solve quadratic equation by completing the square
Solve Simultaneous equations
Solve linear and nonlinear simultaneous equations
Draw and use Scatter Graphs including line of best fit
Calculate Mean, Median from grouped data