

Term 1

Unit	Detailed topic
Number	Rounding to decimal places Rounding to significant figures Estimation Using a calculator
	Converting recurring decimals to fractions
	Calculate fractions of amounts and in reverse
	Add and subtract fractions & mixed numbers
	Multiply & divide fractions & mixed numbers
Algebraic Manipulation A	Index laws for brackets, multiplication and division including zero
	Fractional and Negative fractional indices
	Convert and correct Standard form $a \times 10^n$ Calculating using sf Solve problems involving standard form (incl. non calculator methods)
	Collecting like terms
	Multiply a single term over a bracket (including $3(x+1) - 8(2x-5)$)
	Factorise single bracket -Take out common factors
	Expanding double/triple brackets
	Factorising quadratics including $a > 1$ and difference of two squares
Ratio & Proportion	Simplify ratio Write a ratio as fraction
	divide a quantity in a given ratio Shared ratio when given part or difference Combining ratio (including sharing)
	Direct & inverse proportion – unitary method
	Best buys Recipes Currency conversion
	Convert between standard units of mass, length, area, volume and capacity

Primes, LCM, HCF	express integers as product of powers of prime factors
	find highest common factors (HCF) and lowest common multiples (LCM) Include worded exam questions and already in index form
Statistical Measures	calculate the mean, median, mode and range for a discrete data set Find the interquartile range from a discrete data set
	Mean, mode, median and range from frequency table
	Estimate for the mean, and find modal class, median and range for grouped data.
Linear Equations & Inequalities	Substitution USE BRACKETS e.g. $2(-3) = -6$
	solve linear equations, with integer or fractional coefficients, in which the unknown appears on either or both sides
	Forming and solving equations
	solve linear inequalities and represent the solution on a number line (negative flips the sign!) Including with double inequality
Pythagoras' & Trigonometry	use Pythagoras' theorem in applied questions
	Use SOHCAHTOA
	Mixed Pythagoras and SOHCAHTOA problems
	3D Trigonometry and Pythagoras
	Angles of elevation and depression including 3D
Linear Graphs	Plot linear graphs (Use table function)
	Calculate gradient of a drawn line and when given 2 points.
	Finding the equation of a line given 2 coordinates or gradient and a point. Midpoint and length of a line segment
	Parallel and perpendicular lines

Changing the Subject & Proportion	Change the subject, include subject needing factorising
	set up problems involving direct or inverse proportion and relate algebraic solutions to graphical representation of the equations
Percentages	<p>solve simple percentage problems, including percentage increase and decrease using multipliers</p> <p>use reverse percentages</p> <p>use compound interest and depreciation including multiple interest rates and reverse problems</p> <p>Percentage change</p>
Graphical Representation of Data	<p>Draw cumulative frequency diagrams</p> <p>Use cumulative frequency diagrams to find median and IQR and more/less than a value.</p> <p>Drawing histograms</p> <p>Interpret a histogram</p> <p>Complete a table and histogram</p> <p>Find the median etc</p>