Mathematics Topic Lists 2017-2018

Second Form

Unit	Topics	Unit	Topics
21 Algebra 2	Solving Linear Equations	35 Area 2	Area of a Trapezium
	Expanding brackets		Mixed Area Problems
22 Translations	Translations - introduce Vector form		Mixed Composite Area Problems
23 Mean	Introduction to Discrete Data	36 Ratio	Ratios and their link to Fractions
	Mean - all		Simplifying Ratios
	Grouped Data - discrete data only		Comparing Ratios
	Mean from Grouped Data		Ratios in the form 1:n
24 Algebra 3	Substituting Values into Formulae		Finding an Unknown Value in a Ratio
	Expanding Single Brackets		Dividing in a given ratio
	Equations with Brackets	37 Circles	Naming parts of a Circle
	Solving simple fractional equations		Circumference of a Circle
25 Straight Line Graphs 2	Introduce gradient		Area of a Circle
	Finding the gradient		Quadrants and Semi Circles
	Plotting straight line graphs		Compound Shapes
	Introduce $y = mx + c$	38 Indices 2	Quick review of basic index laws
	Parallel Lines and effect of c		Zero and Negative Indices
	$y - y1 = m(x - x1)$ only with top students		Fractional Indices
	Real Life Graphs	39 Pie Charts	Pie Charts
26 Standard Form	Reminder of Basic Index Laws	40 3D Objects	3D Objects, Plans and Elevations
	Converting to Standard Form		3D shapes and their Volumes
27 Sequences	Introduction to Common Sequences	41 Pythagoras	Introduction to Pythagoras
	Common Difference Sequences	42 Bearings	Introduction
	Common Ratio Sequences		Drawing and measuring bearings
	Finding the nth term	42 Bearings	Calculating bearings
	Using the nth term to generate a sequence		Calculations with map scales
28 Median, Mode, Range	Median, Mode and Range	46 Tree Diagrams	Review probability
29 Interior and Exterior Angles	External Angles of a Polygon		Introduction to Tree Diagrams
	Internal Angles of a Polygon		Independent Events
30 Inequalities	Introduction to Inequalities	45 Statistics 2	Introduction to Continuous Data
	Solving Linear Inequalities		Finding an Estimate of the Mean
31 Factorising	Factorising into a Single Bracket		Finding the Median and Modal Group
32 Percentages 2	Review of 1st year percentage work	44 Simultaneous Equations	Solution of a Simple Pairs of Equations
	Percentage increase and decrease - multiplier method		Multiplying one equation
	Calculating the Original Amount		More complicated examples
33 Transformations	Review of Reflections and Translations		Forming and solving simultaneous equations
	Rotations - with tracing paper	47 Functions	Using function machines
	Finding the Centre of Rotation - use tracing paper		Function notation
	Positive Enlargements		Inverse functions - more complicated inverses done later
	Mixed Transformations	43 Approximations 2	More Sig Fig rounding, Estimating, Bounds
34 Algebraic Fractions	Fractions review		
	Algebra review		
	Adding and Subtracting simple Algebraic Fractions		
	Multiplying and Dividing Algebraic Fractions		
	Solving equations involving Algebraic Fractions		
	Wordy problems		
	Changing the Subject of the Formula		