

Year 9 Foundation Scheme of learning 2021-2022 - Term 1

Stretch key learning in italics

Topic	Key learning	Hegarty clips	⊗	☺	☺
Integers and place value	Order integers and decimals using symbols < and >	14,46			
	Add, subtract, multiply and divide integers positive and negative	39,41, 42, 43			
	Use BIDMAS in calculations	24, 44			
	Check answers by rounding and using inverse operations	17, 56, 130			
Decimals	Compare and order decimal numbers using the symbols <, >	46			
	Add, subtract, multiply and divide decimals, including calculations involving money	47, 48, 50, 754			
	Round to a given number of decimal places and significant figures	17, 56, 130			
	Estimate answers to calculations by rounding to 1 significant figure	130, 131			
	<i>Use one calculation to find the answer to another</i>				
Indices, powers and roots	Add, subtract, multiply and divide numbers written in index notation	102-107, 173			
	Use brackets and BIDMAS with powers	120, 150			
	Use calculators with indices	110, 790			
	<i>Add, subtract, multiply and divide numbers in index form</i>	102-107			
Factors multiples and primes	Use factor trees to write a number as a product of its prime factors	29, 30			
	Find the HCF and LCM of two numbers by listing	32, 34, 35			
	Find HCF and LCM by using venn diagrams	35			
	<i>Solve problems with HCF and LCM</i>	36			
October half term					
Algebra basics and index laws	Simplify expressions by collecting like terms	156, 157			
	Multiply together two simple algebraic expressions, e.g. $2a \times 3b$	158, 159			
	Simplify expressions by cancelling, e.g. $4x / 2 = 2x$	172			
	Use index laws in algebra when multiplying or dividing	173-175			
	Select an expression/equation/formula/identity from a list	154			
Expanding and factoring single brackets	Expand a single set of brackets	160			
	Expand and simplify with two single sets of brackets	161			
	Factorise into a single set of brackets	168, 169			
Expressions and substitution into formulae	Substitute numbers into simple expressions and formulae	780, 781			
	Substitute positive and negative numbers into expressions	784			
	Substitute numbers into expressions involving brackets and powers	782, 783			
	<i>Use kinematics formulae and derive a simple formula</i>	287			
Pythagoras' theorem	Calculate the length of a side of the triangle using pythagoras	497-499			
	Solve problems involving Pythagoras	501			
Christmas holidays					

Year 9 Foundation Scheme of learning 2021-2022 - Term 2

Stretch key learning in italics

Topic	Key learning	Hegarty clips	⊗	☺	☺
Tables	Design and use tally tables for discrete and continuous data	401, 402			
	Change between 12 and 24 hour clocks	709, 710			
	Read from a table of values including finding the mode	404, 415			
	Design and use two way tables	422-424			
Graphs and charts	Draw and use pictograms, bar charts, line graphs and histograms with equal width	425, 426			
	Draw and use stem and leaf diagrams	430-433			
	Find the mode from different charts	413, 415			
	Produce line graphs for time series data	450-452			
Pie charts	Construct circles, draw and measure angles accurately	461, 659			
	Read from simple pie charts, including finding the mode	428, 429			
	<i>Construct pie charts</i>	427			
Scatter graphs	Draw scatter graphs and a line of best fit	453, 454			
	Interpret correlation in a scatter graph	453			
	<i>State how reliable the predictions are from a scatter graph</i>	454			
February half term					
Fractions	Write a fraction in its simplest form and find equivalent fractions	59-61			
	Convert between mixed numbers and improper fractions	63, 64			
	Add, subtract, multiply and divide fractions	65, 66, 68, 70			
	<i>Add, subtract multiply and divide mixed numbers.</i>	69, 72			
Fractions, decimals and percentages	Convert between fractions decimals and percentages	55, 73-76, 82, 83, 149			
	Order fractions, decimals and percentages using inequality signs	46, 60			
	<i>Recognise recurring decimals and convert to fractions such as $\frac{1}{3}$</i>	53, 54			
Percentages	Find a percentage of an amount with and without a calculator	84-87			
	Calculate percentage increase and decrease with and without a calculator	88, 90			
	Use a multiplier to increase or decrease by a percentage	89			
	<i>Solve more complex percentage problems</i>	98			
Easter holidays					

Year 9 Foundation Scheme of learning 2021-2022 - Term 3

Stretch key learning in italics

Topic	Key learning	Hegarty clips	⊗	☹	☺
Equations	Write expressions and set up simple equations	151-153, 188			
	Solve simple equations	177-178			
	Substitute into a formula and solve the equation it produces	155, 189, 780, 781			
	<i>Solve equations with letter on both sides</i>	184			
	<i>Solve equations containing brackets</i>	183, 185			
	<i>Rearrange simple equations</i>	287			
	<i>Solve angle or perimeter problems using algebra</i>	552, 565			
Inequalities	Show an inequality on a number line	265-267			
	<i>Use inequality notation to specify simple error intervals due to truncation or rounding</i>	137-138, 774			
	Solve simple linear inequalities	269			
	<i>Solve an inequality such as $-3 < 2x + 1 < 7$ and show the solution set on a number line</i>	265-267			
Shapes and parallel lines	Identify quadrilaterals and their properties as well as special triangles	557-558, 823-826			
	Recall and use angles on a straight line, around a point and in a triangle	477-479, 812-814			
	<i>Find missing angles using properties of corresponding, alternate and co-interior angles</i>	481-483, 815			
May half term					
Rates of change	Read values in km/h and mph from a speedometer				
	Calculate percentage profit or loss	759-762			
	Solve problems involving currency conversion and best buys	707-708, 763-766			
	<i>Calculate density, pressure and speed</i>	725, 734, 716			
Similarity and congruence	Use angle facts for missing angles	488			
	Enlarge a shape by a given scale factor	642-643			
	<i>Use the basic congruence criteria for triangles (SSS, SAS, ASA, RHS)</i>	680-682			
	Solve problems to find missing lengths in similar shapes	611-613			
	<i>Understand the effect of enlargement on perimeter of shapes</i>	870			
Loci, Constructions and bearings	Estimate and measure lengths and angles	457			
	Draw accurate lengths and angles	461			
	Draw and measure bearings	492-493			
	Construct perpendicular bisectors and angle bisectors	660-661			
	<i>Use constructions to solve loci problems</i>	674-675			
Summer holidays					