

Y9	
HT1	Expected outcomes
Number	Factors, multiples and primes
	Write a number as a product of prime factors
	Use prime factors (E)
	Highest common factor (HCF) and lowest common multiple (LCM)
	Venn diagrams
	Use a Venn diagram to calculate the HCF and LCM
	Integers, real numbers and rational numbers
	Introduction to surds (E)
	Percentage increase and decrease
	Express a change as a percentage
	Find the original value after a percentage change
	Solve problems with percentages (non-calculator)
	Solve problems with percentages (calculator)
	Repeated percentage change
	Understand interest
	Simple interest
	Compound interest
	Assessment 1: 2. Percentages plus feedback
Geometry and measures	Nets
	Area of a 2-D shape
	Area and circumference of a circle
	Surface area of cubes and cuboids
	Surface area of a triangular prism (E)
	Surface area of a cylinder (E)
	Volume of a prism
	Volume of a cylinder
	Volume of cones, pyramids and spheres (E)
	Convert metric units of area and volume (E)
	Assessment 2: 3. Area and volume plus feedback
Algebra	Solve equations and inequalities
	Solve equations and inequalities with brackets
	Inequalities with negative numbers (E)
	Solve equations and inequalities with unknowns on both sides

	Solve problems with equations and inequalities
	Problem solving / catch up
HT2	Small Steps (objectives)
Algebra	Substitute into formulae and equations
	Change the subject of a formula (one-step)
	Change the subject of a formula (two-step)
	Change the subject of complex formula (E)
Number	Add and subtract fractions
	Multiply and divide fractions
	Fraction of an amount
	Maths Week (16-20 Nov)
Ratio, proportion and rates of change	Speed, distance and time
	Distance-time graphs
	Solve flow problems and their graphs
	Rates of change and their units
	Convert compound units (E)
Number	Numbers in standard form
	Compare and order numbers in standard form
	Multiply and divide numbers in standard form
	Add and subtract numbers in standard form
	Assessments 3,4: 1-7. Summative WRM Term 1 - w/c 07.12.26
Number	Step 1 Understand a bank account
	Step 2 Spending
	Step 3 Ways to pay
	Step 4 Ways to save
	Step 5 Jobs and pay
	Step 6 Investing
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HT3	Small Steps (objectives)
Number	Step 7 Borrowing (buying a house)
	Step 8 Running a house or a business
	Step 9 Budgeting
	Step 10 Borrowing (loans)
	Step 11 Spending overseas
	Step 12 Insurance
Algebra	Step 1 Lines, parallel to the axes, $y=x$ and $y=-x$
	Step 2 Explore gradients
	Step 3 Explore intercepts

	Step 4 $y=mx+c$
	Step 5 Rearrange equations to the form $y=mx+c$ (E)
	Step 6 Find the equation of a line from a graph
	Step 7 Interpret gradient and intercepts of real-life graphs
	Step 8 Graph inequalities (E)
	Assessment 5: 9. Straight line graphs and feedback
Ratio, proportion and rates of change	Step 1 Direct proportion
	Step 2 Direct proportion and conversion graphs
	Step 3 Inverse proportion
	Step 4 Inverse proportion graphs (E)
	Step 5 Ratio problems (whole or part given)
	Step 6 Solve problems with ratio and algebra (E)
	Problem solving / catch up
HT4	Small Steps (objectives)
Geometry and measures	Step 1 Draw and measure angles
	Step 2 Accurately draw triangles using ASA and SAS
	Step 3 Accurately draw triangles using SSS
	Step 4 Construct an angle bisector
	Step 5 Construct a perpendicular bisector
	Step 6 Construct a perpendicular from or to a point
	Step 7 Construct more complex polygons
	Step 8 Identify congruent figures
	Step 9 Congruent triangles
Geometry and measures	Step 1 Recognise enlargement and similarity
	Step 2 Work out unknown lengths and angles in similar shapes
	Step 3 Solve problems with similar triangles (E)
	Step 4 Ratio in right-angled triangles (E)
Algebra	Step 1 Expand single brackets and simplify
	Step 2 Factorise into a single bracket
	Step 3 Expand double brackets
	Step 4 Use identities
	Step 5 Factorise quadratic expressions (E)
	Step 6 Solve quadratic equations (E)
	Step 7 Expand triple brackets (E)
	Assessments 6,7: 7-12. Summative WRM Term 2
EASTER	
HT5	Small Steps (objectives)
Geometry and	Step 1 Solve equations with squares and square roots

measures	Step 2 Identify the hypotenuse
	Step 3 Determine whether a triangle is right-angled
	Step 4 Pythagoras theorem (find the hypotenuse)'
	Step 5 Pythagoras theorem (find any side)'
	Step 6 Use Pythagoras theorem on coordinate axes'
	Step 7 Proofs of Pythagoras theorem (E)
	Step 8 Pythagoras theorem in 3-D shapes (E)
Algebra	Step 1 Substitute into quadratic expressions
	Step 2 Draw simple quadratic graphs
	Step 3 Draw more complex quadratic graphs
	Step 4 Interpret quadratic graphs
	Step 5 Interpret reciprocal and exponential graphs
	Step 6 Draw cubic graphs (E)
	Step 7 Interpret cubic graphs (E)
	Step 8 Interpret roots, intercepts and turning points (E)
	Assessment 8: 14. Pythagoras' theorem and feedback
Probability	Step 1 Identify and represent sets
	Step 2 Intersection of a set
	Step 3 Union of a set
	Step 4 Complement of a set (E)
	Step 5 Probability of a single event
	Step 6 Use diagrams to work out probabilities
	Step 7 Relative frequency
	Step 8 Expected outcomes
	Step 9 Independent events
	Step 10 Probabilities from Venn diagrams
	Problem solving / catch up
HT6	Small Steps (objectives)
Geometry and measures	Step 1 Enlargement (positive scale factor)
	Step 2 Enlargement from a point (positive scale factor)
	Step 3 Enlargement (fractional scale factor)
	Step 4 Enlargement (negative scale factor) (E)
	Step 5 Describe an enlargement
	Step 6 Rotation about a point
	Step 7 Describe a rotation
	Step 8 Translation
	Step 9 Describe a translation
	Step 10 Reflection
	Step 11 Find the result of a series of transformations (E)

	Assessment 9: 17. Transformations and feedback
Algebra (optional block)	Step 1 Use one value to find another
	Step 2 Introduction to simultaneous equations
	Step 3 Solve simultaneous equations using graphs
	Step 4 Solve simultaneous equations (no adjustments)
	Step 5 Manipulating equations
	Step 6 Solve simultaneous equations (adjust one)
	Step 7 Solve simultaneous equations (adjust both) (E)
	Step 8 Solve simultaneous equations by substitution (E)
Geometry and measures (optional block)	Step 1 Identify hypotenuse, opposite and adjacent sides
	Step 2 Use the tangent ratio to find unknown side lengths
	Step 3 Use sine and cosine ratios to find unknown side lengths
	Step 4 Use sine, cosine and tangent ratios to find unknown angles
	Step 5 Choose the right method
	Step 6 Key angles in right-angled triangles (E)
	Step 7 Trigonometry in 3-D shapes (E)
	Assessments 10,11: 14-19: Summative WRM Term 3
	Sports Day and Activities week
SUMMER	

<https://www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study/national-curriculum-in-england-mathematics-programmes-of-study#key-stage-3>