Year 7	Big Questions	Small Questions
Autumn 1	**Whole Numbers and Decimals**	• Order decimals • Understanding of place value • Use of inequality signs
		• Multiply and divide by powers of 10 (multiply and divide by 0.1, 0.01 etc) • Use of negative numbers in context (eg temperature change) • Add and subtract negative numbers • Multiply and divide negative numbers
		• Mental methods for addition and subtraction (include problem solving, worded questions) • Written methods for addition and subtraction (include problem solving, worded questions) • Use of a calculator • Use of estimation to check calculator results • Round to decimal places
	MINI TEST	
	Measures, Perimeter and Area	• Convert between metric units of measure • Calculate the perimeter of regular shapes • Calculate the perimeter of compound shapes (including finding missing sides)
		• Choosing the most appropriate metric unit • Estimating lengths and heights • Calculate the area of a rectangle using formula • Calculate the area of triangles using the formula
		• Calculate the area of compound shapes constructed from rectangles and triangles • Calculate the area of a parallelogram using the formula • Calculate the area of a circle (extension) • Calculate the area of a trapezium (extension)
	MINI TEST	
	Expressions and Formulae	• Use of letters for unknowns • Writing expressions • Simplifying expressions by addition and subtraction • Collecting like terms to simplify more complex expressions • Forming and simplifying expressions for perimeter
		• Expand a single bracket – expand and simplify two single brackets (extension) • Substituting positive and negative values into expressions • Substitute into formulae • Creating and using simple formulae

HALF TERM ASSESSMENT		
Year 7	**Big Questions**	**Small Questions**
Autumn 2	Fractions, Decimals and Percentages	• Simplify fractions • Find equivalent fractions • Convert between improper and mixed fractions • Add and subtract fractions with a common denominator • Add and subtract fractions with a different denominator
		• Add and subtract mixed numbers (extension) • Find a fraction of a quantity • Convert between fractions, decimals and percentages
		• Mentally calculate percentages • Use a calculator method to find more complex percentages • Percentage increases and decreases • Express one quantity as a percentage of another (extension) • Use of multipliers to find increases and decreases (extension)
	MINI TEST	
	Angles and 2D Shapes	• Calculate angles on a straight line and round a point • Calculate vertically opposite angles • Calculate missing angles in triangles (include equilateral and isosceles)
		• Calculate exterior angles in triangle (using straight line fact) • Give geometric reasons for missing angles • Find angles in parallel lines (basic)
		• Calculate angles in quadrilaterals • Find the angle sum of a regular polygon • Calculate interior and exterior angles in regular polygons
	MINI TEST	
	Graphs	• Coordinates in all four quadrants • Plotting linear graphs • Investigate the effect m and c have on a linear graph (extension) • Draw and interpret real life graphs
	HALF TERM ASSESSMENT	

Year 7	Big Questions	Small Questions
Spring 1	Statistics	• Drawing and reading bar charts (including comparative bar charts) • Drawing and reading pie charts • Drawing and reading line graphs
		• Calculate the mode, median and range for discrete data • Calculate the mean for discrete data • Use the four averages to compare data • Tally charts and frequency tables • Calculate the mean of a frequency table (extension)
	MINI TEST	
	Transformations and Symmetry	• Reflect shapes in horizontal and vertical mirror lines • Reflect in diagonal lines (extension) • Identify lines of symmetry • Rotate shapes and describe rotations • Identify rotational symmetry
		• Translate shapes (encourage use of column vectors) • Tessellate shapes • Enlarge shapes (positive whole number) • Enlarge shapes from a centre of enlargement (extension)
	MINI TEST	
	Whole Number Calculations	• Round to decimal places • Round to significant figures • Order of operations (BIDMAS) • Mental methods for multiplication and division • Written methods for multiplication and division • Effective use of a calculator (brackets, roots and indices) • Worded problems
	HALF TERM ASSESSMENT	

Year 7	Big Questions	Small Questions
Spring 2	Solving Equations	• Multiply and divide terms • Using a balancing method to solve simple equations • Solve one stage equations (adding and subtracting) • Solve one stage equations (multiplying and dividing)
		• Solve two stage equations • Solve two stage equations including brackets (extension) • Form and solve equations (extension)
	MINI TEST	
	Factors and Multiples	• Prime numbers • Square numbers and square roots • Find factors and multiples
		• HCF and LCM • Use of prime factor decomposition (extension) • Use of Venn diagrams for HCF (extension • Tests for divisibility
	MINI TEST	
	Angles and Constructions	• Draw and measure angles • Construct triangles • Bearings • Scale drawings
		• Isometric drawing • Plans and Elevations • Nets
	HALF TERM ASSESSMENT	

Year 7	Big Questions	Small Questions
Summer 1	Sequences	• Continue visual patterns • Continue sequences • Continue a sequence from a term to term rule
		• Find the term to term rule of a sequence • Continue a sequence from a position to term rule • Continue a sequence from an nth term • Find the nth term of a sequence
	MINI TEST	
	Decimal Calculations	• Mental methods for decimal addition and subtraction • Mental methods for decimal multiplication and division
		• Written methods for decimal addition and subtraction • Written methods for decimal multiplication and division • Interpreting a calculator display
	MINI TEST	
	Volume	• Find volume by counting cubes • Find volume of a cuboid using formula • Find volume of simple prisms
	HALF TERM ASSESSMENT	

Year 7	Big Questions	Small Questions
Summer 2	Ratio and Proportion	• Introduction to proportion • Direct proportion • Recipe problems
		• Writing ratio • Simplify ratio • Divide an amount in a given ratio • Calculating one part of a ratio given another part • Problem solving using simple direct proportion and ratio
	MINI TEST	
	Probability	• Understand and use the probability scale • Calculate probabilities • Theoretical probability
		• Experimental probability (probability experiments) • Understand and use Venn diagrams • Simple tree diagrams (extension)
	END OF YEAR ASSESSMENT	
	Pythagoras	• Calculating squares and roots • Estimating a square root (extension) • Pythagoras by drawing • Pythagoras by formula (extension)
	Inequalities	• Inequality signs • Listing integers that satisfy inequalities • Representing inequalities on a number line • Solving simple inequalities (extension)