

Year 8

Timing	Unit Title	Key Question	Knowledge	Assessing Understanding
Autumn	Approximation and Estimation	Can you round numbers to different degrees of accuracy?	<ul style="list-style-type: none"> • Rounding to decimal places • Rounding to significant figures • Estimation 	<p>How understanding is assessed</p> <ul style="list-style-type: none"> • By applying the theory to a range of questions and increasingly more complex situations • Discussion in lessons, sample problems • Homework and tests <p>Skills</p> <ul style="list-style-type: none"> • Understanding of the concepts • Numerical skills • Algebraic skills • Problem solving skills <p>Assessment Point information</p> <ul style="list-style-type: none"> • Classroom tests relevant to topics studied
	Algebraic Expressions, Formulae	Can you use algebraic expressions and formulae to model real world problems?	<ul style="list-style-type: none"> • Use of letters in algebra • Evaluation and simplification of algebraic expressions and formulae • Algebraic expression in real world • Expanding and factorising 	
	Solving Equations	Can you solve worded problems by forming and solving equations?	<ul style="list-style-type: none"> • Solving equations with brackets and fractions • Forming and solving different types of equations in one variable 	
	Percentages	Can you use a decimal multiplier to solve percentage problems?	<ul style="list-style-type: none"> • Simple interest and reverse percentages • Percentage increase and decrease • Repeated percentage changes • Calculate repeated percentage change • Calculate compound interest • Solve problems involving growth and depreciation 	
	Ratio, Rate and Speed	Do you know how to use ratios to solve problems?	<ul style="list-style-type: none"> • Integer Ratios including simplifying ratios and sharing in ratios • All kinds of ratio problems • Scale plans and maps • Rate and speed 	
	Angles in Quadrilaterals and Polygons	Do you know how to use interior and exterior angles of polygons to solve angle problems?	<ul style="list-style-type: none"> • Angles in quadrilaterals • Angles in polygons 	

Spring	Pythagoras' Theorem	Can you use Pythagoras' Theorem to solve right-angled triangle problems?	<ul style="list-style-type: none"> Using Pythagoras' theorem to find missing sides. Problem Solving 	<p>How understanding is assessed</p> <ul style="list-style-type: none"> By applying the theory to a range of questions and increasingly more complex situations Discussion in lessons, sample problems Homework and tests UKMT Junior Maths Challenge <p>Skills</p> <ul style="list-style-type: none"> Understanding of the concepts Numerical skills Algebraic skills Problem solving skills <p>Assessment Point information</p> <ul style="list-style-type: none"> Classroom tests relevant to topics studied <p>How understanding is assessed</p> <ul style="list-style-type: none"> By applying the theory to a range of questions and increasingly more complex situations
	Area and Circumference of Circle	Can you use the circle formulae to solve problems?	<ul style="list-style-type: none"> Find the circumference of a circle Find the area of a circle Problem solving with area and circumference of circle 	
	Coordinates and Linear Functions	Can you understand the link between a linear function and its graph?	<ul style="list-style-type: none"> Cartesian coordinate system Introducing functions Linear functions and their graphs Gradients of linear graphs 	
	Inequalities in One Variable	Can you solve problems with inequalities?	<ul style="list-style-type: none"> Understand linear inequalities Representing inequalities on a number line Solve simple linear inequalities Solve problems involving inequalities 	
	Volume and Surface Area of Prisms and Cylinders	Do you know how to find the volume and surface area of different prisms and cylinders?	<ul style="list-style-type: none"> Views and nets of 3D shapes Volume and surface area of prisms Volume and surface area of cylinders Composite solids 	
	Number Patterns	Can you find the general term of a sequence?	<ul style="list-style-type: none"> Recognising number patterns and sequences General term of a sequence Solve problems involving number patterns and sequences 	

Summer	Statistical Graphs	Do you know how to use different graphs and charts to represent data?	<ul style="list-style-type: none"> • Line graphs • Pie charts • Use and misuse of statistical graphs • Scatter graphs 	<ul style="list-style-type: none"> • Discussion in lessons, sample problems • Homework and tests <p>Skills</p> <ul style="list-style-type: none"> • Understanding of the concepts • Numerical skills • Algebraic skills • Spatial awareness • Problem solving skills <p>Assessment Point information</p> <ul style="list-style-type: none"> • Exam relevant to topics studied
	Transformation	Do you know how to enlarge a shape with different scale factors?	<ul style="list-style-type: none"> • Drawing enlargement (positive, negative and fractional) • Finding the centre of enlargement and describing enlargement • Drawing and describing combined transformations 	
	Probability	Can you find the probability of single and combined events?	<ul style="list-style-type: none"> • Probability and single event • Expected number of outcomes • Experimental vs theoretical • Listing outcomes • Sample space diagrams • Probability of combined events 	
	Bearings	Do you understand how to use bearings?	<ul style="list-style-type: none"> • Drawing bearings • Problem solving with bearings 	
	Construction and Loci	Do you know how to draw standard constructions with your ruler and compasses?	<ul style="list-style-type: none"> • Constructions • Loci 	
	Mathematical Signs and Notations Project	Research Project	<ul style="list-style-type: none"> • Research • Make a poster 	