

Year 8

| Timing | Unit Title | Key Question | Knowledge | Assessing Understanding |
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| Autumn | Factors and Multiples | Do you know how to use HCF and LCM to solve problems? | <ul style="list-style-type: none"> • Prime number and prime factorisation. • HCF and LCM. • Roots. | <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. |
| | 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. | |
| | Algebraic Expressions, Formulae and Proof | 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. • Factorisation. • Proof. | |
| | Equations and Inequalities | 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. • Inequality relationships. • Solving simple inequalities. | |

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| Spring | 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. | <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. |
| | Percentages | Can you use decimal multiplier to solve percentage problems? | <ul style="list-style-type: none"> ● Simple interest and reverse percentages. ● Percentage increase and decrease. ● Repeated percentage changes. | |
| | 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. | |
| | Number Patterns | Can you find the general term of a sequence? | <ul style="list-style-type: none"> ● Number Patterns and Sequences. ● General term of a sequence. | |

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| Summer | 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. | <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. • Spatial awareness. • Problem solving skills. <p>Assessment Point information</p> <ul style="list-style-type: none"> • Exam relevant to topics studied. |
| | Perimeter and Area of Parallelograms and Trapezia | Do you know how to find the area and the perimeter of a parallelogram or a trapezium? | <ul style="list-style-type: none"> • Area of parallelograms. • Area of trapezia. • Perimeter and area of composite shapes. | |
| | 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. | |
| | 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. | |