



Year 10					
Half term 1: Autumn 1	Half term 2: Autumn 2	Half term 3: Spring 1	Half term 4: Spring 2	Half term 5: Summer 1	Half term 6: Summer 2
Angles Purpose: See below (Box 1) Overview of the knowledge and skills covered in this unit: - Angles in polygons - Angles in parallel lines - Bearings - Trigonometry (including extract values) Prior knowledge: - Angles around a point, on a line and in a triangle - Corresponding, alternate, co interior and vertically opposite angles - North, South, East, West - Clockwise and anti-clockwise - Using a protractor and a ruler - Draw and measure angles - Angle notation How will this be assessed? See below (Box 2)	Sequences and graphs Purpose: See below (Box 1) Overview of the knowledge and skills covered in this unit: - Prove a given number is in a sequence - Special sequences (square, cubed, triangular numbers) - Gradient of a line - Draw quadratic graphs - Create an equation from a graph or given coordinates - Find the midpoint of a line - Identify parallel and perpendicular lines give an equation - Recognise cubic and reciprocal graphs - Fibonacci sequences and geometric progression Prior knowledge: - Coordinates - Generate term to term sequences - Sequences from patterns/ diagrams - Nth term - Substitution - Draw a straight line graph - Use a graph to find a solution to an equation - Rearranging formula - Parallel and perpendicular lines - Knowledge of axis How will this be assessed? See below (Box 2)	Using ratio Purpose: See below (Box 1) Overview of the knowledge and skills covered in this unit: - Combine ratios to solve problems - Use ratio to convert compound units (density g/cm³) - Direct proportion (<i>using</i> $y=kx$) - Inverse proportion (<i>using</i> $y=k/x$) - Problem solving with ratio Prior knowledge: - Ratios as fraction and fractions as ratios - Equivalent ratios - Ratios in recipes - Use ratio to convert length, capacity and mass - Ratios and exchange rates How will this be assessed? See below (Box 2)	Powers (runs from Spring 2 into Summer 1.) Purpose: See below (Box 1) Overview of the knowledge and skills covered in this unit: - Use index laws to simplify standard form $+$, $-$, $\times$, $\div$ numbers in standard form - Value of numbers with negative powers Prior knowledge: - Square, cubed, square root and cubed root numbers $\times$ and $\div$ numbers by 10, 100 and 1000 - Index notation - Index laws - Write numbers in Standard form How will this be assessed? See below (Box 2)	3D solids Purpose: See below (Box 1) Overview of the knowledge and skills covered in this unit: - Properties of solids - Nets of solids - Plans and elevations - Surface area and volume of cubes, cuboids, cylinders, prisms and spheres <i>Convert units of volume</i> <i>Volume and surface area of pyramids</i> Prior knowledge: - Name 3D solids and identify its faces, edges and vertices 2D shapes (triangles and quadrilaterals and all polygons from a pentagon to an octagon) - Area of 2D shapes (all triangles, squares, rectangles, parallelograms and trapeziums) - Squared and cubed numbers $\times$ and $\div$ numbers How will this be assessed? See below (Box 2)	Probability Purpose: See below (Box 1) Overview of the knowledge and skills covered in this unit: - Mutually exclusive events - Probability of something not happening - Listing outcomes - Sample space diagrams - Tree diagrams (with replacement) - Tree diagrams (without replacement) Prior knowledge: - Probability scale - Probability notation - Probability of an independent event - Experimental probability $\times$ fractions and decimals How will this be assessed? See below (Box 2)



Percentages (runs from Autumn 1 into Autumn 2.) Purpose: See below (Box 1) Overview of the knowledge and skills covered in this unit: - Percentages of amounts - Show a number as a percentage of another - Percentage change (profit, loss) - Simple and compound interest Prior knowledge: - Convert fractions and decimals into percentages - Increase and decrease by a percentage - Multipliers - Calculator skills - Fraction of amounts How will this be assessed? See below (Box 2)		Circles (runs from Spring 1 into Spring 2) Purpose: See below (Box 1) Overview of the knowledge and skills covered in this unit: - Parts of a circle - What π is - Round to an exact value - Circumference and area of a circle - Compound shapes including circles - Arc length - Area of a sector Prior knowledge: - Rounding to decimal places and significant figures - Calculator skills How will this be assessed? See below (Box 2)			
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Box 1: Designed to reinforce foundational concepts from Years 7, 8, and 9, each unit actively extends students’ mathematical understanding into real-world applications.	Box 2: Each unit concludes with a post-assessment. Additionally, a comprehensive mock assessment will be held in the summer term, covering all knowledge from the start of Year 9 through the Year 10 summer term.
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