

Maths - Year 7	Emerging (Em)	Developing (De)	Secure (Se)	Advanced (Ad)
<p align="center">Attainment Target 1 (AT1) Arithmetic</p>	<p>Able to answer questions on number with guidance. Consolidate their numerical and mathematical capability from key stage 2 and extend their understanding of the number system and place value to include decimals and fractions</p>	<p>Able to answer questions on number with some. Order positive and negative integers, decimals, and fractions; use the number line as a model for ordering of the real numbers</p>	<p>Able to use methods learnt to answer more complex number questions. Round numbers and measures to an appropriate degree of accuracy, for example, to 2 decimal places</p>	<p>Able to apply knowledge of number to problem solving questions. Select and use appropriate calculation strategies to solve increasingly complex problems</p>
<p align="center">Attainment target 2 (AT2) Algebra</p>	<p>Able to answer questions on algebra with guidance. Use algebra to generalise the structure of arithmetic, including to formulate mathematical relationships</p>	<p>Able to answer questions on algebra with some scaffolding. Simplify and manipulating collecting like terms</p>	<p>Able to use methods learnt to answer more complex algebra questions. Substitute values in expressions, and simplify expressions</p>	<p>Able to apply knowledge of algebra to problem solving questions. Select and use appropriate calculation strategies to solve increasingly complex problems</p>
<p align="center">Attainment target 3 (AT3) Geometry</p>	<p>Able to answer questions on geometry with guidance. Calculate and solve simple problems involving: perimeters of 2-D shapes</p>	<p>Able to answer questions on geometry with some scaffolding. Derive and apply formulae to calculate and solve problems involving: perimeter and area of triangles, and parallelograms</p>	<p>Able to use methods learnt to answer more complex geometry questions. Derive and apply formulae to calculate and solve problems involving: perimeter and area of triangles, parallelograms, and trapeziums</p>	<p>Able to apply knowledge of geometry to problem solving questions. Select and use appropriate calculation strategies to solve increasingly complex problems</p>
<p align="center">Attainment target 4 (AT4) Ratio and Proportion</p>	<p>Able to answer questions on ratio and proportion with guidance. Understand that a multiplicative relationship between two quantities can be expressed as a ratio or a fraction</p>	<p>Able to answer questions on ratio and proportion with some scaffolding. Divide a given quantity into two parts in a given part: part or part: whole ratio; express the division of a quantity into two parts as a ratio</p>	<p>Able to use methods learnt to answer more complex ratio and proportion questions. Extend and formalise their knowledge of ratio and proportion in working with measures and geometry</p>	<p>Able to apply knowledge of ratio and proportion to problem solving questions. Select and use appropriate calculation strategies to solve increasingly complex problems</p>

Attainment target 5 (AT5) Statistics	Able to answer questions on statistics with guidance. Construct and interpret appropriate tables, charts, and diagrams	Able to answer questions on statistics with some scaffolding. Construct and interpret appropriate tables, charts, and diagrams, including frequency tables	Able to use methods learnt to answer more complex statistics questions. Construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pictograms, and pie charts	Able to apply knowledge of statistics to problem solving questions. Select and use appropriate calculation strategies to solve increasingly complex problems
Maths - Year 8	Emerging (Em)	Developing (De)	Secure (Se)	Advanced (Ad)
Attainment Target 1 (AT1) Arithmetic	Able to answer questions on number with guidance. Use the concepts and vocabulary of prime numbers, factors, and multiples	Able to answer questions on number with some scaffolding. Use the concepts of prime numbers, factors, multiples, common factors, and common multiples	Able to use methods learnt to answer more complex number questions. Use the concepts of prime numbers, factors, multiples, common factors, common multiples, highest common factor, lowest common multiple, and prime factor decomposition	Able to apply knowledge of number to problem solving questions. Use conventional notation for the priority of operations, including brackets, powers, roots, and reciprocals
Attainment target 2 (AT2) Algebra	Able to answer questions on algebra with guidance. Simplify and manipulating collecting like terms	Able to answer questions on algebra with some scaffolding. Simplify and manipulating multiplying a single term over a bracket	Able to use methods learnt to answer more complex algebra questions. Simplify and manipulating taking out common factors	Able to apply knowledge of algebra to problem solving questions. Simplify and manipulating expanding products of two or more binomials
Attainment target 3 (AT3) Geometry	Able to answer questions on geometry with guidance. Derive and apply formulae to calculate and solve problems involving: perimeter and area of triangles, parallelograms, and volume of cuboids and other prisms	Able to answer questions on geometry with some scaffolding. Derive and apply formulae to calculate and solve problems involving: perimeter and area of triangles, parallelograms, trapezia, volume and surface area of prisms	Able to use methods learnt to answer more complex geometry questions. Calculate and solve problems involving: perimeters of 2-D shapes (including circles), areas of circles and composite shapes	Able to apply knowledge of geometry to problem solving questions. Select and use appropriate calculation strategies to solve increasingly complex problems

Attainment target 4 (AT4) Ratio and Proportion	Able to answer questions on ratio and proportion with guidance. Use ratio notation, including reduction to simplest form	Able to answer questions on ratio and proportion with some scaffolding. Divide a given quantity into two parts in a given part: part or part: whole ratio; express the division of a quantity into two parts as a ratio	Able to use methods learnt to answer more complex ratio and proportion questions. Solve problems involving direct proportion	Able to apply knowledge of ratio and proportion to problem solving questions. Select and use appropriate calculation strategies to solve increasingly complex problems
Attainment target 5 (AT5) Statistics	Able to answer questions on statistics with guidance. Construct and interpret appropriate tables, charts, and diagrams, including frequency tables	Able to answer questions on statistics with some scaffolding. Construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts, and pictograms	Able to use methods learnt to answer more complex statistics questions. Construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts, and pictograms	Able to apply knowledge of statistics to problem solving questions. Describe simple mathematical relationships between two variables (bivariate data) in observational and experimental contexts and illustrate using scatter graphs
Maths - Year 9	Emerging (Em)	Developing (De)	Secure (Se)	Advanced (Ad)
Attainment Target 1 (AT1) Arithmetic	Able to answer questions on number with guidance. Use the concepts of prime numbers, factors, multiples, common factors, and common multiples	Able to answer questions on number with some scaffolding. Use the concepts of prime numbers, factors, multiples, common factors, common multiples, highest common factor, lowest common multiple, and prime factor decomposition	Able to use methods learnt to answer more complex number questions. Use conventional notation for the priority of operations, including brackets, powers, roots and reciprocals	Able to apply knowledge of number to problem solving questions. Interpret and compare numbers in standard form $A \times 10^n$ $1 \leq A < 10$, where n is a positive or negative integer or zero
Attainment target 2 (AT2) Algebra	Able to answer questions on algebra with guidance. Able to solve linear questions with unknowns on one and both sides. Able to plot graphs of equations and solve simultaneous equations graphically. Understand the concepts of inequalities.	Able to answer questions on algebra with some scaffolding. Able to solve linear questions with unknowns on one and both sides with integer and decimal solutions. Able to plot graphs of equations and solve simultaneous equations graphically and by elimination. Understand the concepts of	Able to use methods learnt to answer more complex algebra questions. Able to solve more complex linear questions as well as form or derive an equation. Able to plot graphs of equations and interpret gradients and intercepts. Can solve simultaneous equations graphically and by elimination.	Able to apply the knowledge of algebra to problem solving questions. Able to solve more complex linear questions as well as form or derive an equation. Able to plot graphs of equations and interpret gradients and intercepts. Can solve simultaneous equations graphically and by elimination.

		inequalities and solve inequalities in one variable.	Can represent solutions to inequalities on a number line.	Can represent solutions to inequalities on a number line and represent the solutions set to an inequality using set notation.
Attainment target 3 (AT3) Geometry	Able to answer questions on geometry with guidance. Can calculate with brackets, powers, roots, and reciprocals. Can use standard conventions to label triangles and use bearings. Can use Pythagoras's Theorem in right angled triangles. Know 3D shapes, converting units of length and volume of cuboids.	Able to answer questions on geometry with some scaffolding. Can calculate with brackets, powers, roots, and reciprocals. Can simplify and manipulate expressions including those involving surds. Can apply the concepts of congruence and similarity to 2D shapes. Confident with Pythagoras's Theorem in right angled triangles. Know 3D shapes, converting of units of measure and volume of prisms.	Able to use methods learnt to answer more complex questions on geometry. Can rationalise denominators and work with indices including fractional ones. Can simplify and manipulate expressions including those involving surds. Confident with Pythagoras's Theorem and Trigonometry in 2D and 3D right angled triangles. Converting a range of metric measure including area and volume. Know how to calculate volume of common prisms.	Able to apply knowledge of geometry to problem solving questions. Can rationalise denominators and work with fractional indices Can simplify and manipulate expressions including those involving surds. Confident with Pythagoras's Theorem and Trigonometry in 2D and 3D right angled triangles and how to apply exact trigonometric ratios. Converting a range of metric measure including area and volume. Know how to calculate volume of common prisms leaving answers in exact format.
Attainment target 4 (AT4) Ratio and Proportion	Able to answer questions on ratio and proportion with guidance. Use ratio notation, including reduction to simplest form	Able to answer questions on ratio and proportion with some scaffolding. Divide a given quantity into two parts in a given part: part or part: whole ratio; express the division of a quantity into two parts as a ratio	Able to use methods learnt to answer more complex ratio and proportion questions. Use scale factors, scale diagrams and maps	Able to apply knowledge of ratio and proportion to problem solving questions. Select and use appropriate calculation strategies to solve increasingly complex problems
Attainment target 5 (AT5) Statistics	Able to answer questions on statistics with guidance. Construct and interpret appropriate tables, charts, and diagrams, including frequency tables	Able to answer questions on statistics with some scaffolding. Construct and interpret appropriate tables, charts, and diagrams, including frequency	Able to use methods learnt to answer more complex statistics questions. Describe simple mathematical relationships between two variables (bivariate data) in	Able to apply knowledge of statistics to problem solving questions. Select and use appropriate calculation strategies to solve

		tables, bar charts, pie charts, and pictograms	observational and experimental contexts and illustrate using scatter graphs and knowing correlation	increasingly complex problems
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