Key Stage 3 Subject Assessment Grid			
Subject: **Maths** Year: **7** **AUTUMN 1 – Place Value, Addition and Subtraction, Angle Sums**			
KS4 target direction	**4**	**6**	**8 (9)**
Advanced	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension
Secure *Students must achieve competence in **all highlighted** statements before being judged 'Secure'*	**Secure** The student can: • Order positive and negative integers • Order positive decimals to 2 decimal places • Round decimals to the nearest whole number or 1 decimal place • Add and subtract negative numbers • Add and subtract integers and decimals of any size (with the same number of decimal places) • Calculate perimeters of shapes made of rectangles • Draw and measure any angle (including reflex) • Recognise vertically opposite angles • Know the angles at a point, on a straight line and in a triangle	**Secure** The student can: • Order positive and negative decimals (including numbers with a differing number of decimal places) • Round decimals to 2 decimal places • Add and subtract integers and decimals of any size (including negatives and numbers with a differing number of decimal places) • Calculate and use the perimeter of any shape • Know and use angles in a quadrilateral • Identify alternate and corresponding angles • Solve geometrical problems using alternate and corresponding angles justifying answers .	**Secure** The student can: • Order any set of numbers (including those written in standard form) • Round decimals to an appropriate degree of accuracy (including significant figures) • Add and subtract numbers written in standard form • Use positive and negative numbers of any size, the laws of arithmetic and inverse operations • Solve problems involving perimeter (considering upper and lower bounds) • Know and use properties of angles, parallel and intersecting lines, triangles and other polygons • Interior and exterior angle sums • Solve geometric problems using step-by-step reasoning
Developing	Mostly secure – one or more gaps	Mostly secure – one or more gaps	Mostly secure – one or more gaps
Beginning	Significant gaps	Significant gaps	Significant gaps

Stage 3 Subject Assessment Grid			
Subject: **Maths** Year: **7** **AUTUMN 2 – Multiplication and Division; Multiples and Factors; Applications**			
KS4 target direction	**4**	**6**	**8 (9)**
Advanced	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension
Secure *Students must achieve competence in **all highlighted** statements before being judged 'Secure'*	Secure The student can: • Multiply and divide decimals with one or two decimal places by an integer • Multiply and divide negative numbers • Recognise square numbers and corresponding square roots • Recognise and use HCF and LCM (in simple cases) • Use Venn diagrams to depict common multiples and factors • Calculate areas of shapes made from rectangles	Secure The student can: • Understand the effect of multiplying and dividing numbers by values between 0 and 1 • Know and apply BIDMAS (including indices) • Use squares, positive and negative square roots, cubes and cube roots, and index notation for small positive integer powers • Find the prime factorisation of a number • Derive and use formula for the area of a triangle, parallelogram, and trapezium • Calculate areas of compound shapes • Know rough metric equivalents of imperial measures .	Secure The student can: • Use positive and negative numbers of any size, the laws of arithmetic and inverse operations including multiplying and dividing decimals by decimals) • Use index notation for integer powers; know and use the index laws for multiplication and division of positive integer powers • Estimate square roots and cube roots • Use the prime factorisation of a number • Convert between length and area measures • Solve problems involving area of compound shapes • Find the circumference and area of circles (simple) • Exchange rates
Developing	Mostly secure – one or more gap	Mostly secure – one or more gaps	Mostly secure – one or more gaps
Beginning	Significant gaps	Significant gaps	Significant gaps

Key Stage 3 Subject Assessment Grid			
Subject: **Maths** Year: **7** **SPRING 1 – Fractions; Applications**			
KS4 target direction	**4**	**6**	**8 (9)**
Advanced	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension
Secure *Students must achieve competence in **all highlighted** statements before being judged 'Secure'*	**Secure** The student can: • Express a smaller number as a percentage or fraction of a larger one • Multiply fractions by an integer • Use percentages to compare simple proportions • Add and subtract simple fractions • Convert between fractions, decimals and percentages • Calculate fractions and percentages of quantities • Interpret simple pie charts	Secure The student can: • Multiply and divide fractions • Order fractions by writing as equivalents or converting into decimals • Add and subtract fractions • Use division to convert a fraction to a decimal • Increase and decrease and amount by a given percentage • Read and draw simple pie charts .	**Secure** The student can: • Multiply and divide simple algebraic fractions • Simplify or transform algebraic expressions by taking out single-term common factors • Add and subtract simple algebraic fractions • Convert recurring decimals into fractions • Increase and decrease an amount by a given percentage or fraction • Use multipliers for percentage change • Solve problems with pie charts
Developing	Mostly secure – one or more gaps	Mostly secure – one or more gaps	Mostly secure – one or more gaps
Beginning	Significant gaps	Significant gaps	Significant gaps

Key Stage 3 Subject Assessment Grid			
Subject: **Maths** Year: **7** **SPRING 2 – Ratio and Proportion; Shape**			
KS4 target direction	**4**	**6**	**8 (9)**
Advanced	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension
Secure *Students must achieve competence in **all highlighted** statements before being judged 'Secure'*	**Secure** The student can: • Use direct proportion in simple contexts • Use ratio notation • Simplify ratios (including money and time) • Divide a quantity into two parts in a simple ratio • Understand the link between ratio and proportion • Increase and decrease and amount by a given percentage • Use 2D shape in ratio problems	**Secure** The student can: • Use the unitary method to solve problems involving ratio and direct proportion • Simplify ratios, including those in different units • Divide a quantity into two or more parts given a ratio • Apply understanding of link between ratio and proportion • Use 2D and 3D shape in ratio problems	**Secure** The student can: • Use proportional reasoning to solve problems, choosing the correct numbers to take as 100%, or as a whole • Compare two ratios • Simplify ratios, recognising links with fraction notation • Calculate ratios in a range of contexts • Recognise when fractions or percentages are needing to compare proportions • Extend mental methods of calculation with fractions, percentages, and ratios • Use 2D and 3D shape in ratio problems
Developing	Mostly secure – one or more gaps	Mostly secure – one or more gaps	Mostly secure – one or more gaps
Beginning	Significant gaps	Significant gaps	Significant gaps

Key Stage 3 Subject Assessment Grid			
Subject: **Maths** Year: **7** **SUM 1 – Sequences; Algebraic Expressions**			
KS4 target direction	**4**	**6**	**8 (9)**
Advanced	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension
Secure *Students must achieve competence in **all highlighted** statements before being judged 'Secure'*	**Secure** The student can: • Generate terms of a simple sequence, given a rule • Describe the general term of a simple sequence • Generate sequences from patterns or practical contexts • Use iterative processes • Use letter symbols to represent unknown numbers or variables • Simplify linear algebraic expressions by collecting like terms (numbers and letters) • Understand that algebraic operations follow the rules of arithmetic • Multiply a single term over a bracket (positive integer coefficients)	**Secure** The student can: • Generate terms of a linear sequence using term-to-term and position-to-term rules • Use linear expressions to describe the *n*th term of a simple arithmetic sequence • Relate linear sequences to linear functions • Explore iterative sequences • Use index notation for small positive integer powers • Simplify or transform linear expressions by collecting like terms • Understand that algebraic operations, including the use of brackets, follow the rules of arithmetic • Multiply a single term over a bracket (positive and negative integers)	**Secure** The student can: • Generate terms of a linear sequence using term-to-term and position-to-term rules • Use linear expressions to describe the nth term of as simple arithmetic sequence • Explore quadratic sequences • Represent linear sequences graphically • Describe a rule for iterative sequences • Simplify or transform algebraic expressions by taking out single-term common factors • Add simple algebraic fractions • Expand two brackets to form a quadratic expression • Work with general iterative processes e.g. use systematic trial and improvement methods to find approximate solutions of equations such as $x^3 + x = 20$.
Developing	Mostly secure – one or more gaps	Mostly secure – one or more gaps	Mostly secure – one or more gaps
Beginning	Significant gaps	Significant gaps	Significant gaps

Key Stage 3 Subject Assessment Grid			
Subject: **Maths** Year: **7** **SUM 2 – Algebraic Manipulation and Linear Graphs**			
KS4 target direction	**4**	**6**	**8 (9)**
Advanced	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension – reaching, or part of, next pathway	Enrichment/extension
Secure *Students must achieve competence in **all highlighted** statements before being judged 'Secure'*	**Secure** The student can: • Use simple formulae from mathematics and other subjects • Substitute positive integers into simple linear expressions and formulae • Construct and solve simple linear equations, e.g. 4a=12 • Construct and interpret graphs and diagrams to represent data, including bar line graphs and frequency diagrams for grouped discrete data • Use coordinates in all four quadrants and identify coordinates of points determined by geometric information • Represent simple functions using words, symbols and mappings • Plot graphs of simple linear functions (*y* given explicitly in terms of *x)*.	Secure The student can: • Use formulae from mathematics and other subjects • Substitute positive integers into expressions involving small powers • Derive simple formulae and in simple cases change subject • Express simple functions algebraically and represent them in mappings or on a spreadsheet • Generate points in all four quadrants and plot graphs of linear functions (*y* given explicitly in terms of *x*), on paper and using ICT • Recognise that equations of the form $y = mx + c$ correspond to straight-line graphs • Discuss and interpret graphs arising from real situations.	**Secure** The student can: • Change the subject of simple formulae • Substitute numbers into expressions and formulae • Construct and solve linear equations with integer coefficients (unknown on one or both sides, without and with brackets) • Represent and solve problems involving constant or average rates of change graphically • Generate points and plot graphs of linear functions given explicitly (y given in terms of x) and implicitly (*y* given implicitly in terms of *x*, e.g. $ay + bx = 0$, $y + bx + c = 0$) • Find the gradient of lines given by equations of the form $y = mx + c$ • Understand and use measures of compound measures speed, density and <u>pressure</u> and solve problems involving constant or average rates of change.
Developing	Mostly secure – one or more gaps	Mostly secure – one or more gaps	Mostly secure – one or more gaps
Foundation	Significant gaps	Significant gaps	Significant gaps