

Maths Skills Year 7	Emerging	Developing	Securing	Mastering
Place Value and Indices	To use times tables; place value	To use times tables; \times and \div by powers of 10, calculate times, money and measurements	To compare decimals; order of operations; negative numbers; factors and multiples; prime numbers	To use metric units; 4 operations with negatives; \times and \div by negative powers of 10; prime factors
Algebra Manipulation	To use letters to represent unknown numbers	To use letters to model situations; algebraic notation; simplification; substitution	To use algebraic notation; simplification; substitution with a focus on order of operations	To form expressions; expanding brackets
Angles	To state angle vocabulary and name common 2D shapes	To measure and draw angles; angles on straight lines; nets; constructions	To calculate angles on lines, around points and in triangles; tessellation; construction of triangles	To calculate angles on parallel and perpendicular lines; angles in polygons; properties of 2D shapes; bearings
Solving Equations	To do simple substitution and use function machines	To complete function machines; forming equations; solving 1 - and 2 -step linear equations	To solve equations with an unknown on each side	To solve linear equations with brackets; rearrange simple formulae
Perimeter, Area and Volume	To find area and perimeter by measuring or counting	To find area and perimeter by measuring, counting or calculation	To recall and use formulae for area or rectilinear shapes, parallelograms, triangles and trapezia; area and perimeter of compound shapes	To use circle terminology; area and circumference of a circle; area and perimeter problems
Ratio and Proportion		Complete calculations of percentages and fractions; writing ratios	To use equivalent ratios; sharing in a given ratio; fractions to/from ratios	To use unitary method; percentage of an amount; direct proportion; scale drawing
Probability	To state probability using words	To use probability scales	To estimate probability using numbers; experimental probability	To use sample space diagrams; possibility trees; mutually exclusive outcomes; probability of complements

Maths Skills Year 8	Emerging	Developing	Securing	Mastering
Place Value and Indices	To use times tables; \times and \div by powers of 10, calculate times, money and measurements	To compare decimals; order of operations; negative numbers; factors and multiples; prime numbers	To use metric units; 4 operations with negatives; \times and \div by negative powers of 10; prime factors	To use indices; positive integer powers and roots; LCM and HCF through prime factors; related calculations
Algebra Manipulation	To use letters to model situations; algebraic notation; simplification; substitution	To use algebraic notation; simplification; substitution with a focus on order of operations	To form expressions; expanding brackets	To use expressions with index notation; function notation; subtracting a bracket; factorising into a single bracket; proof
Angles	To measure and draw angles; angles on straight lines; nets; constructions	To calculate angles on lines, around points and in triangles; tessellation; construction of triangles	To calculate angles on parallel and perpendicular lines; angles in polygons; properties of 2D shapes; bearings	To use Pythagoras' theorem; constructions; congruency; proof
Solving Equations	To complete function machines; forming equations; solving 1 - and 2 -step linear equations	To solve equations with an unknown on each side	To solve linear equations with brackets; rearrange simple formulae	Form and solve linear equations involving simple fractions; solve linear equalities
Perimeter, Area and Volume	To find area and perimeter by measuring, counting or calculation	To recall and use formulae for area or rectilinear shapes, parallelograms, triangles and trapezia; area and perimeter of compound shapes	To use circle terminology; area and circumference of a circle; area and perimeter problems	To calculate volume and surface area of prisms and cylinders
Ratio and Proportion	Complete calculations of percentages and fractions; writing ratios	To use equivalent ratios; sharing in a given ratio; fractions to/from ratios	To use unitary method; percentage of an amount; direct proportion; scale drawing	To calculate % increase/decrease/change (including compound interest); reverse %; indirect proportion
Probability	To use probability scales	To estimate probability using numbers; experimental probability	To use sample space diagrams; possibility trees; mutually exclusive outcomes; probability of complements	To calculate relative frequency; probability notation; frequency trees; probability trees; Venn diagrams

Maths Skills Year 9	Emerging	Developing	Securing	Mastering
Place Value and Indices	To compare decimals; order of operations; negative numbers; factors and multiples; prime numbers	To use metric units; 4 operations with negatives; \times and \div by negative powers of 10; prime factors	To use indices; positive integer powers and roots; LCM and HCF through prime factors; related calculations	To use negative integer powers; standard form
Algebra Manipulation	To use algebraic notation; simplification; substitution with a focus on order of operations	To form expressions; expanding brackets	To use expressions with index notation; function notation; subtracting a bracket; factorising into a single bracket; proof	To expand and factorising quadratics; difference of two squares; quadratic graphs
Angles	To calculate angles on lines, around points and in triangles; tessellation; construction of triangles	To calculate angles on parallel and perpendicular lines; angles in polygons; properties of 2D shapes; bearings	To use Pythagoras' theorem; constructions; congruency; proof	To calculate using trigonometry in right -angled triangles
Solving Equations	To solve equations with an unknown on each side	To solve linear equations with brackets; rearrange simple formulae	Form and solve linear equations involving simple fractions; solve linear equalities	Solve linear equations with fractions that require + or –; solve simultaneous equations using elimination
Perimeter, Area and Volume	To recall and use formulae for area or rectilinear shapes, parallelograms, triangles and trapezia; area and perimeter of compound shapes	To use circle terminology; area and circumference of a circle; area and perimeter problems	To calculate volume and surface area of prisms and cylinders	To calculate arc length; sector area; volume of spheres/pyramids/cones; area/volume unit conversion
Ratio and Proportion	To use equivalent ratios; sharing in a given ratio; fractions to/from ratios	To use unitary method; percentage of an amount; direct proportion; scale drawing	To calculate % increase/decrease/change (including compound interest); reverse %; indirect proportion	To find exponential growth and decay
Probability	To estimate probability using numbers; experimental probability	To use sample space diagrams; possibility trees; mutually exclusive outcomes; probability of complements	To calculate relative frequency; probability notation; frequency trees; probability trees; Venn diagrams	To combine probabilities; set notation; tree diagrams