Mathematics – Y9 Assessment Descriptors

	Foundation	Developing	Securing	Exceeding	Excelling
Year 9 Spring term 1	Confidently and independently be able to… • Find the area and perimeter of simple shapes on a square grid. Use area formulae for rectangles. Find their perimeters. • Know equivalence of simple fractions, decimals and percentages. Calculate simple percentages eg. 50%, 25%, 10%. Add and subtract simple fractions with common denominators; calculate simple fractions of quantities and measurements. Order/compare simple fractions, decimals and percentages.	Confidently and independently be able to… • Calculate the areas of triangles and parallelograms using the formulae. Calculate the volume of a cuboid. Convert between metric units of measurement. Calculate the area and perimeter of compound shapes made from rectangles. • Express fractions in their simplest form. Calculate a fraction of an amount. Calculate a percentage of an amount.	Confidently and independently be able to… • Calculate the total surface area of cuboids. Calculate the area and circumference of a circle using pi. • Add and subtract fractions changing one denominator. Convert between fractions, decimals and percentages. Compare using fractions. Express an amount as a percentage. Use multipliers to calculate percentage increases. Add and subtract fractions changing both denominators.	Confidently and independently be able to… • Convert between metric units of measurement of area. Find the area/perimeter of more difficult compound shapes incl missing lengths. Solve problems involving lengths of circular arcs and areas of sectors. • Use efficient methods to add, subtract, multiply and divide mixed numbers. Calculate successive percentage changes. Calculate compound interest. Solve problems involving percentage changes using multiplicative methods.	Confidently and independently be able to… • Calculate lengths, areas and volumes of prisms including cylinders. Distinguish between formulae for perimeter, area and volume, by considering dimensions. Apply the formulae to calculate the volume of a cones and spheres. • Change recurring decimals to fractions. Calculate reverse percentages. Apply knowledge and skills of numerical fractions to algebraic fractions.

	Foundation	Developing	Securing	Exceeding	Excelling
Year 9 Spring term 2	Confidently and independently be able to… • Know the meanings of the words term, expression and equation. Solve one step equations. Use formulae given in words. Expand single brackets - multiplied by a positive constant. • Identify lines of symmetry in simple shapes and recognise shapes with no lines of symmetry. Read and plot coordinates in the first quadrant. Transform 2-D shapes by rotation, reflection and translation (using left/right/up/down).	Confidently and independently be able to… • Solve 2 step equations involving negatives and divisions. Write simple expressions from information given in words. Solve equations with unknowns on both sides (no negatives). • Rotate shapes accurately, be able to describe the order of rotational symmetry and identify the centre of rotation. (Not on a coordinate grid) . Recognise and visualise all the symmetries of 2-D shapes. Perform basic single transformations (reflections and translations) on a Cartesian grid. Identify which transformation has taken place.	Confidently and independently be able to… • Solve simple linear inequalities. Form and solve simple equations from information given in diagrams or words. Solve equations with unknowns on both sides including brackets, negative terms and divisions. • Enlarge shapes from a centre and with a positive scale factor on a Cartesian grid. Rotate shapes through 90, 180, 270 degrees about a centre on a Cartesian grid (centres may not be at the origin). Describe single transformations fully using appropriate mathematical language. Identify reflection symmetry in 3-D shapes.	Confidently and independently be able to… • Solve linear inequalities in one variable; represent the solution set on a number line. Form and solve more complex equations from information given in diagrams or words. Solve a pair of simultaneous linear equations by eliminating one variable where one is a multiple of another. Change the subject of a simple formula. • Enlarge shapes from a centre and with a positive fractional or negative scale factor on a Cartesian grid. On a Cartesian grid identify and describe fully transformations, including combined transformations as a single transformation.	Confidently and independently be able to… • Factorise quadratic expressions. Solve a pair of simultaneous linear equations by eliminating one variable where one is not a multiple of another. Solve quadratic equations. Change the subject of a formula, including cases where the subject occurs twice. • Know that if two 2-D shapes are similar, corresponding angles are equal and corresponding sides are in the same ratio. Calculate missing lengths in similar triangles.