Year & KS4 Indicator step			KS3 Maths Progress Criteria (Curriculum Intent Code)				
Yr 7	Yr 8	Yr 9	**Number**	**Algebra**	**Ratio/Proportion**	**Geometry**	**Statistics/Data Handling**
		9+	• Evaluate numbers with negative and fractional powers. • Convert a recurring decimal into a fraction.	• Solve a pair of simultaneous equations with different coefficients. • Use the formula to solve a quadratic equation. • Solve a series of linear inequalities on a graph.	• Perform calculations involving growth and decay such as calculating compound interest.	• Use trigonometry to find missing angles and lengths in right angled triangle. • Use Pythagoras in 3D.	• Correctly draw a histogram with unequal groups. • Construct a box plot from a list of data. • Be able to consider outliers and their impact on averages.
	9+	9	• Use upper and lower bounds of number in calculations.	• Expand any pair of double brackets. • Factorise and solve quadratic expressions. • Solve simple simultaneous equations both algebraically and graphically.	• find reverse percentages using multipliers. • calculate the pressure of a force on an area	• Calculate length of an arc. • Calculate area of sector. • Enlarge shapes with negative/fractional scale factors	• find the quartiles from a list of data. • draw a tree diagram without replacement and calculate probabilities from it
9+	9	8	• Apply laws of indices including negative powers. • Add and subtract with surds. • Add and subtract with standard form.	• Able to plot a quadratic graph. • State the equation of a line given two points. • Recognise cubic and reciprocal graphs and use these to approximate solutions graphically. • find the nth term of a quadratic sequence.	• change between compound units such as speed and density. • calculate percentage profit and loss. • solve indirect proportion problems	• Use Pythagoras to find missing lengths of triangles. • Find interior and exterior angles of any size polygon	• interpolate and extrapolate using a line of best fit. • calculate the mean from a frequency table
9	8	7	• Find the upper and lower bounds of rounded numbers. • Use divisibility laws to check if any number is prime (up to 100 mill.).	• Solve a linear inequality. • State difference between an expression, equation, identity • Solve a linear equation with one or two negative unknowns. • Change the subject of a formula where the unknown appears on one side.	• work confidently with percentage greater than 100% • calculate density, mass or volume of an object. • solve direct proportion problems using the unitary method	• Construct with compasses and straight edge	• draw a time series graph. • display and interpret probability outcomes in a Venn diagram. • know the difference between experimental and theoretical probabilities
8	7	6	• Simplify surds. • Convert between standard form and ordinary form. • Multiply numbers in standard form.	• Solve a linear equation with positive unknowns on both sides. • Expand a combination of linear brackets. • State the equation of a parallel line.	• share into a given ratio. • calculate the simple interest of money. • draw and interpret a time-distance graph. • use a multiplier on a calculator to calculate percentage change	• Find surface area of volume prisms. • Find the area and circumference of circles. • Accurately describe single transformations	• draw a scatter diagram and interpret the correlation. • draw a tree diagram with replacement and calculate probabilities from it

7	6	5	• Round to Significant Figures. • Apply laws of divisibility to identify primes. • Apply laws of indices including zero power. • Complete arithmetic with mixed numbers and improper fractions. • Use product of primes to find HCF/LCM.	• Solve an equation including single brackets, negatives and fractions. • Plot a straight-line graph of the form ax + by = c. • state the gradient and y-intercept of any straight-line graph. • factorise a linear expression	• calculate speed, distance or time of an object. • order fractions, decimal and percentages by converting.	• Enlarge a shape from a point with positive scale factor. • Find missing angles in parallel lines using corresponding/alternate/co-interior. •	• create a sample space diagram based on two events. • use a stem and leaf diagram to order numbers. • find averages from stem and leaf
6	5	4	• Complete arithmetic with proper fractions. • Find HCF/LCM of pairs of numbers. • Identify product of prime factors.	• plot a straight-line graph of the form y = ax + b • find the nth term of a linear sequence. • substitute a negative number into an expression or formula	• convert between fractions, decimals, and percentages. • write one number as a percentage of the other	• Find area of parallelograms and trapezia. • Enlarge a shape (no centre) • Rotate a shape around a point.	• draw a pie chart from a set of data. • find the mean from a list of data
5	4	3	• Round to decimal places. • Apply order of operations correctly.	• simplify multiplied expressions. • expand a single bracket. • create and use a formula. • continue a Fibonacci or geometric sequence	• calculate percentage increase and decrease. • create a scale drawing	• Reflect a shape in a line. • State the properties of quadrilaterals. • Translate a shape. • Identify 3D shapes from their nets.	• calculate the probability of an equally likely event. • know that probability outcomes sum to 1. • construct and complete a two- way table
4	3	2	• Multiply and divide with decimals. • Find a fraction of an amount. • Identify square (to 10) & cube numbers (to 5). • List factors and multiples. • Can identify prime numbers below 100.	• substitute a positive number into an expression or formula. • draw a straight-line graph. • of the form y=k and x=k • form and solve a linear two- step equation	• find a percentage of an amount. • use a scale on a map	• Identify parallel and perpendicular lines. • Label the key features of a circle. • Find missing angles in triangles and quadrilaterals	• find the median from a list of data. • place events on a worded probability scale
3	2	1	• Multiply and divide with integers. • Simplify fractions. • Find equivalent fractions. • Find a unit fraction of an amount.	• collect like terms. • generate a sequence given the rule. • solve a linear one-step equation. • plot and read co-ordinates in all four quadrants	• find equivalent ratios. • simplify a ratio	• Accurately use a protractor to draw angles. • Recognise types of angles. • Find area of rectangles and triangles. • Find perimeter of triangles and quadrilaterals. • Find missing angles in straight lines, at a point and vertically opposite.	• calculate the range from a list of data. • draw and interpret a pictogram. • use the language of probability
2	1	-1	• Multiply and divide integers and decimals by powers of 10. • Add and subtract decimal numbers.	• recognise the term-to-term rule of a sequence. • plot co-ordinates in the first quadrant	• write a ratio from words or pictures	• Identify lines of symmetry in 2D shapes. • Accurately use a compass	• find the mode from a list of data.

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				• Identify inverse operations.		• Accurately use a protractor to measure angles. • Find area of squares	
1	-1	-1	• Add and subtract with integers up to 4 digits. • Identify place value up to 10 million. • Round to nearest 10/100/1,000.	• Find the missing number from basic addition/subtraction number sentences.	• Convert between standard units of measurement and volume.	• Draw 2D shapes. • Recognise 3D shapes. • Identify congruent shapes.	• draw and interpret a bar chart. • find minimum and maximum values from a list of data.