Key words in Mathematics (KS4)

A	Acute – an angle less than 90° Add – to join numbers to make one number, represented by the + sign Adjacent – next to Angle of elevation – the angle between a line and a horizontal, looking up Approximation – not exact but close enough to be useful Arc – part of the circumference of a circle Area – measure of the space inside of a 2D shape Arithmetic – study of numbers Asymptote- a line or curve that the graph of a relation approaches more and more closely the further the graph is followed Axes – plural of axis Axis – one of two straight lines on a graph on which measurements are recorded
B	Bearing – the angle of a line measured clockwise from north Biased – unfair or favoured towards a particular outcome BIDMAS – order of operations (Brackets, Indices, Division, Multiplication, Addition, Subtraction) Bisector – a line that divides an angle or line segment into two Box plot – a statistical diagram used to illustrate median, quartiles and range Brackets – ()
C	Capacity – the amount that something can hold Cartesian – rectangular coordinate system with x- and y-coordinates Centimetre – a metric unit of measurement, cm Certain – definitely will happen Chord – a straight line joining two points on a curve Circle – a 2D shape which has one edge that is always the same distance from the centre Circular – in the shape of a circle Circumference – the perimeter of a circle Cluster – the members of a sample form a cluster Coefficient – a number that multiplies a variable Compound Interest – depends on interest previously paid and increases each year Compound Shape – made up of different standard shapes Conditional- an "If . . . then . . ." statement. For example, "If it is raining, then the grass is wet." Cone – a 3D shape with a circular base which tapers to a point Congruent – exactly the same shape and size Consecutive – following on immediately from the term before Constant – value that does not change Construction – drawing using ruler and compasses Conversion – changes between units of measurement, e.g. ounces to grams Coordinates – a measure of location on a graph Correlation – the degree of relationship between two measures Cosine – a trigonometric function; adjacent over hypotenuse in a right angled triangle Cube – a 3D shape that 6 identical faces Cuboid – a 3D shape that has 6 faces Cumulative frequency – the total of all frequencies so far in a frequency distribution Currency – type of money used Cylinder – a 3D shape that has two circular faces and one curved face
D	Data – set of values Decimal place – the position of a digit to the right of a decimal point Degrees – measure of an angle Denominator – the number on the bottom of a fraction Diagonal – a line joining two non-adjacent vertices on a shape Diameter – a line segment joining two points on the circumference of a circle going through the centre Dimension – perimeter is one-dimensional, area is two-dimensional, volume is three-dimensional Distribution -how data is shared or spread out Divide – to share, represented by the ÷ sign
E	East – one of the four compass directions Edge – where two adjacent faces of a solid meet Enlargement – a transformation where size and position are changed but not shape Equal – same value Equation – a statement that two mathematical expressions are equal Equidistant – the same distance from two points

	Equilateral – having all sides of equal length Equivalent - equal Estimate – a reasoned guess Evaluate – find the value Evens – equal chance of happening or not happening Experimental probability - ratio of the number of times an event occurs to the total number of trials performed Exponent – power or index Expression – numbers, symbols and operators grouped together
F	Fair – unbiased Foot – equal to 12 inches or about 30 centimetres Formula – grouping of mathematical symbols that express a relationship Fraction – a number made up of a numerator and a denominator Frequency density- the frequency divided by the class width Frequency polygon – a diagram for displaying data where the midpoints of the class intervals are joined by lines Function – a rule that connects one value with another
G	Gallon – imperial measurement of volume equal to 8 pints or about 4.5 litres Geometry – study of shapes Gradient – the slope of a line Gram – metric measurement of mass, a thousandth of a kilogram Graph – a diagram showing the relationship between two variables Greater – more than
H	Hemisphere – half a sphere Heptagon – seven sided polygon Hexagon – six sided polygon Highest common factor (HCF) – the HCF of two numbers is the largest number that divides into both Horizontal – side to side Hundred - 100 Hypotenuse – the side of a right angled triangle which is opposite the right angle Hypothesis – a prediction which can be tested
I	Identical – exactly the same shape and size Identity – an equation that is true for all values of its variables Improper fraction – a fraction whose numerator is greater than its denominator Inch – imperial measure of length approximately equal to 2.5 centimetres Index – exponent or power Indices – plural of index Inequality – a statement saying that one quantity is less (or more) than another Integer – whole number Intercept – the point on a graph where a line crosses an axis Interior angle – the angle formed inside a polygon between two adjacent sides Interquartile range – difference between the upper and lower quartile Intersect – the point where two lines cross Inverse – the opposite of something, often a function Irrational- a decimal which is never ending. It must also not be a recurring decimal Irregular – a polygon in which at least one side length or angle is not equal to another Isosceles – a triangle with two sides of equal length and two angles of equal size
J	Justify – prove
K	Kilogram – kg, a metric measurement of mass equal to one thousand grams Kilometre – km, a metric measurement of length equal to one thousand metres
L	Length – a measure of distance Likelihood – measure of how likely something is to happen Line of best fit – a straight line on a scatter graph that fits the data as closely as possible Linear – a straight line Litre – a metric measurement of volume equal to one thousand millilitres Loci- the plural of locus Locus – a set of points that fit a given rule Lowest common multiple (LCM) – the LCM of two numbers is the lowest number into which both numbers divide

M	Mass – a measure of how much matter is in an object Mean – a measure of average; the value found by dividing the total by the number of items Median – a measure of average; the middle value of a set of values ordered by size Metre – a metric measurement of length equal to 100 centimetres Midpoint – the point exactly halfway between two others Mile – an imperial measurement of length equal to 1760 yards Milligram – mg, a metric measurement of mass equal to one thousandth of a gram Millilitre – ml, a metric measurement of volume equal to one thousandth of a litre Millimetre – mm, a metric measurement of length equal to one thousandth of a metre Million - 1000 000 Mode – a measure of average; the value occurring most often Multiple – 10 is a multiple of 5 because 10 is in the 5 times table Multiply – times, represented by the × sign
N	Natural number – positive whole number Negative – less than zero Net – 2D shape which can be folded into a 3D shape Nonagon – nine sided 2D shape Numerator – the number on the top of a fraction
O	Obtuse – an angle between 90° and 180° Operation – for example: +, -, x, ÷ Ounce – oz, an imperial measurement of mass; there are 16 ounces in a pound, one is approximately equal to 28g Outcome – a possible result Origin – the point at the intersection of the x- and y-axes Outlier- a data point that is distinctly separate from the rest of the data
P	Parallel – always the same distance apart Percentage – a proportion expressed as a fraction of 100 Perimeter – the total distance around the edge of a shape Perpendicular – one line being at right angles to another Pie chart – a diagram used to illustrate a simple frequency distribution Plane- a flat surface extending in all directions. A plane is a two-dimensional figure. Plot – put points on a graph Polygon – many sided 2D shape Pound – lb, an imperial measurement of mass equal to 16 ounces or approximately 454g Power – exponent or index Prime – a number which has exactly two factors Probability – the chance that something will occur compared to the number of possible outcomes Product – the result of multiplication
Q	Quadrant – one of the four sections into which the axes partition a graph Quadrilateral – a 4 sided 2D shape Quartile – the lower quartile is the middle number between the smallest number and the median of a set Questionnaire – a form containing a set of questions to gather information Quotient – the result of division
R	Radius – distance from the centre of a circle to the circumference Random – in a random sample each member of the population has an equal chance of being selected Range – a measure of the spread; the difference between the largest and smallest values Ratio – a comparison between two or more quantities Rational- a decimal number which ends or is recurring Reciprocal- the reciprocal of x is . In other words, a reciprocal is a fraction flipped upside down Recurring – a non-terminating decimal with a repeating pattern Reflex – angle greater than 180° Remainder – the number left over when a division takes place. 11÷5=2 remainder 1 Right angle – 90° Rounding a Number- a method of approximating a number given a degree of accuracy Root – solution to an equation
S	Scale factor – number of times bigger the lengths of a shape have to be Scalar- a scalar is said to have magnitude but no direction. Temperature, length, and mass are all scalars Scalene – triangle with three different length sides Scatter graph – a graph used to show two sets of data together Semi-circle – half a circle Sequence – list of numbers Shape – can be 2 or 3 dimensional Side – a straight line joining the vertices of a polygon Significant – only zeros before the first non-zero digit are not significant Similar – same shape, different size Simultaneous equations – to be solved assuming same solutions to each Sine – opposite over hypotenuse in a right angled triangle

	Slope – gradient of a straight line SOHCAHTOA – acronym for remembering the trigonometric definitions Solution – reasoned answer Solve – find the answer South – one of the four compass directions Sphere – a 3D shape that is perfectly round Square – a 2D shape with 4 sides, all of equal length Square root – $\sqrt{9}=3, \sqrt{16}=4$ Standard form – a simpler way of writing big and small numbers; $a \times 10^n$ where $1 \leq a < 10, n$ is an integer Statistical – relating to the use of statistics Statistics – study of data and it's analysis Stem and leaf – diagram for listing data Stone – st, an imperial measurement of mass equal to 14 pounds or approximately 6.35kg Subtract – to take one quantity away from another, represented by the – sign Sum – the sum of a set of numbers is the result of adding them all together Survey – to gather information Symmetry – can be lines of symmetry or rotational symmetry
T	Tally- a system of counting where every group of four vertical lines is followed by a horizontal line to easily count in steps of five Tangent – opposite over adjacent in a right angled triangle or a line that touches a circle Term- a number, variable or combination of both which forms part of an expression Tessellate- to cover a plane with identically shaped pieces which do not overlap or leave blank spaces. The pieces do not have to be oriented identically Ton – an imperial measurement of mass equal to 2000lbs Tonne – a metric measurement of mass equal to 1000kg Transformation- the collective name for reflections, rotations, translations and enlargements Translation- to move a shape from one position to another by sliding in the x-axis followed by the y-axis Tree diagram- a method of solving probability questions by listing all the outcomes of an event. Probabilities are calculated by multiplying down the branches Triangle – a 2D shape with 3 sides Triangular number- a sequence of numbers generated by adding one more than was added to find the previous term. For example, 1, 3, 6, 10, 15, 21, ... Trigonometry – study of triangles often involving SOHCAHTOA Truncate- a method of approximating a decimal number by dropping all decimal places past a certain point **without** rounding
U	Unbiased – an unbiased sample is one which represents all parts of a population Uncertain – not certain Unit – a unit of measurement, e.g. g, kg, lb, st, oz, m, in Unlikely – less than an even chance of occurring
V	Variable – a letter which we don't know the value of Vector – a quantity with a direction as well as a magnitude Vertex – where two edges meet Vertical – bottom to top/top to bottom Vertices- plural of vertex Volume – a measure of the amount of space inside an object
W	Weight – the downward force caused by gravity on an object Whole – one entity Width – the distance across from one side to the other
X	x-coordinate – the horizontal value in a pair of coordinates x-axis – the horizontal axis
Y	Yard – an imperial measurement of length equal to 3 feet y-axis – the vertical axis y-coordinate – the vertical value in a set of coordinates y-intercept- the value of the y-coordinate when a graph crosses the y-axis
Z	z-coordinate – the third value in a set of 3D coordinates z-axis – third axis in a 3D graph Zero – the digit 0, representing a value of nothing