Maths Vocabulary Progression and Glossary **2020/2023**

Place Value						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
count subitise order compare numerals digit more less fewer equal	sort represent multiples partition tens ones greater than less than equal to	estimate ascending descending whole number hundreds	thousands interval	Roman numerals Round ten thousand	negative numbers million powers of integer	ten million
Addition and Subtraction						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
add plus altogether total take away minus subtract number bond part whole digit	addition subtraction difference facts inverse	sum commutative estimate exchange regroup column	minuend addend subtrahend dividend			

equal						
Multiplication and Division						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
double half twice equal unequal share group odd even	multiples multiply multiplication divide division array	commutative repeated addition	dividend divisor exchange integer scaling correspondence derived facts	factors distributive remainders	prime numbers square numbers cube numbers product dividend divisor quotient long multiplication short division	long division
Fractions, Decimals and Percentages						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
part whole	half quarter equal parts	three quarters thirds equivalent fractions unit fractions non-unit fractions numerator	tenths	decimal point decimal place hundredths convert round proper fractions improper fractions	fifth thousandths mixed numbers percent percentage factors integer complements	simplify

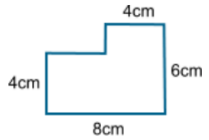
		denominator				
Ratio, Proportion and Algebra						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
						relative size integer multiplication percentages Scale factor unequal sharing grouping formulae linear number sequence algebraically combinations variables
Measure (Height, Length, Weight, Capacity)						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
measure compare big/ bigger/ biggest	mass volume	standard units estimate order centimetre (cm) metre (m)	millimetre (mm) perimeter	Kilometres (km) rectilinear area	decimal notation scaling metric units imperial units inches	conversion miles feet formulae cubic centimetre (cm3)

small/ smaller/ smallest wide(er) narrow (er long(er)(est) short(er)(est) heavy/ heavier light/ lighter length height weight capacity full empty half		kilogram (kg) grams (g) litres (l) millilitres (ml) quarter three quarters temperature Celsius			pounds pints gallons stones ounces composite shape irregular shape square centimetres (cm2) square metres (m2)	cubic metre (m3)
Measure (Time)						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
time quicker slower earlier later before after first next	chronological order year month *days of the week* *months of the year* clock face clock hands o'clock	analogue intervals duration quarter past/to clockwise anti-clockwise	digital roman numerals 12-hour clock 24-hour clock a.m./ p.m. noon midnight midday leap year			

today yesterday tomorrow morning afternoon evening day week hour minutes	half past second hours minutes					
Measure (Money)						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
money coin notes	pounds £ pence p value	change difference				
Geometry (Shape)						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
2D 3D rectangle square circle triangle cuboid cube	pentagon hexagon octagon square based pyramid triangular based pyramid	properties vertices vertex faces edges prism horizontal vertical	right angle acute angles obtuse angles right angle perpendicular lines parallel lines right-angled triangle polygon	reflex angles degrees isosceles scalene equilateral parallelogram quadrilateral	regular polygon Irregular polygon	radius diameter circumference nets

cylinder cone pyramid sphere curved straight flat sides		symmetry symmetrical orientations				
Geometry (Position and Direction)						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
over under between around through on into next to behind beneath on top of order repeat patterns	position direction movement whole turn half turn quarter turn three-quarter turn arrange sequences	left right clockwise anti-clockwise straight rotation		co-ordinates plot first quadrant translation polygon axis	reflection four quadrants	coordinate plane

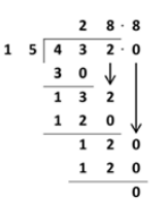
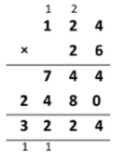
Statistics						
EYFS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
		interpret pictograms tally chart block diagram category rows columns horizontal vertical	table bar chart	discrete data continuous data time graph line graph	timetable	pie chart mean

Glossary	
acute angles	An angle between 0 o and 90 o .
addend	A number to be added to another.
algebraically	The part of mathematics that deals with generalised arithmetic. Letters are used to denote variables and unknown numbers and to state general properties. Example: a(x + y) = ax + ay exemplifies a relationship that is true for any numbers a, x and y. Adjective: algebraic.
array	An ordered collection of counters, numbers etc. in rows and columns.
commutative	Addition and multiplication of real numbers are commutative where a + b = b + a and a × b = b × a for all real numbers a and b. It follows that, for example, 2 + 3 = 3 + 2 and 2 x 3 = 3 x 2. Subtraction and division are not commutative since, as counter examples, 2 – 3 ≠ 3 – 2 and 2 ÷ 3 ≠ 3 ÷ 2.
complements	In addition, a number and its complement have a given total. Example: When considering complements in 100, 67 has the complement 33, since 67 + 33 = 100
composite shape	A shape formed by combining two or more shapes. 
conversion	Changing from one quantity or measurement to another. E.g. from litres to gallons or from centimetres to millimetres etc.
coordinate plane	A two-dimensional plane formed by the intersection of two number lines. One of these number lines is a horizontal number

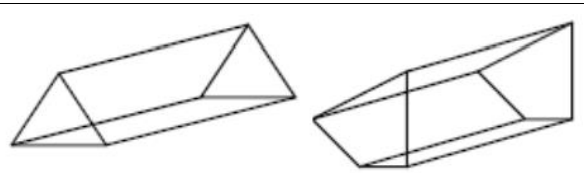
	line called the x-axis and the other number line is a vertical number line called the y-axis.
correspondence	Correspondence problems are those in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?; 12 sweets shared equally between 4 children; 4 cakes shared equally between 8 children).
cube numbers	A number that can be expressed as the product of three equal integers. Example: 27 = 3 × 3 × 3. Consequently, 27 is a cube number; it. It is the cube of 3 or 3 cubed. This is written compactly as 27 = 33 , using index, or power, notation.
cubic centimetre	Symbol: cm3. A unit of volume. The three-dimensional space equivalent to a cube with edge length 1cm.
degrees	The most common unit of measurement for angle. One whole turn is equal to 360 degrees, written 360o
denominator	In the notation of common fractions, the number written below the line i.e. the divisor. Example: In the fraction ⅔ the denominator is 3.
dividend	In division, the number that is divided. E.g. in 15 ÷ 3, 15 is the dividend
divisor	The number by which another is divided. Example: In the calculation 30 ÷ 6 = 5, the divisor is 6. In this example, 30 is the dividend and 5 is the quotient.
edges	A line segment, joining two vertices of a figure. A line segment formed by the intersection of two plane surfaces. Examples: a square has four edges; and a cuboid has twelve edges.
equilateral	Of equal length - e.g. an equilateral triangle is a triangle with all 3 sides of equal length.

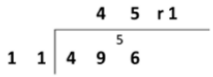
equivalent fractions	Fractions with the same value as another. For example: 4/8, 5/10, 8/16 are all equivalent fractions and all are equal to ½.
estimate	1. Verb: To arrive at a rough or approximate answer by calculating with suitable approximations for terms or, in measurement, by using previous experience. 2. Noun: A rough or approximate answer.
exchange	Change a number or expression for another of equal value. The process of exchange is used in some standard compact methods of calculation. Examples: 'carrying figures' in addition, multiplication or division; and 'decomposition' in subtraction.
faces	One of the flat surfaces of a solid shape. Example: a cube has six faces; each face being a square
factors	When a number, or polynomial in algebra, can be expressed as the product of two numbers or polynomials, these are factors of the first. Examples: 1, 2, 3, 4, 6 and 12 are all factors of 12 because 12 = 1 × 12 = 2 × 6 = 3 × 4: (x – 1) and (x + 4) are factors of (x2 + 3x − 4) because (x – 1)(x + 4) = (x2 + 3x – 4)
formulae	Formula: an equation linking sets of physical variables. e.g. A=πr2 is the formula for the area of a circle. Plural: formulae.
improper fractions	An improper fraction has a numerator that is greater than its denominator. Example: 9 /4 is improper and could be expressed as the mixed number 2¼
integer	Any of the positive or negative whole numbers and zero. Example: …- 2, -1, 0, +1, +2 … The integers form an infinite set; there is no greatest or least integer.
integer multiplication	Adding an integer a specific number of times (repeated addition).
integer scaling	Applying information to smaller or larger quantities.

interval	All possible points in the closed continuous interval between 0 and 1 on the real number line, including the end points zero and 1.
inverse	Operations that, when they are combined, leave the entity on which they operate unchanged. Examples: addition and subtraction are inverse operations e.g. 5 + 6 – 6 = 5. Multiplication and division are inverse operations e.g. 6 × 10 ÷ 10 = 6. Squaring and taking the square root are inverse to each other: √x2 = (√x)2 = x; similarly with cube and cube root, and any integer power n and nth root. Some operations, such as reflection in the x-axis, or 'subtract from 10' are self-inverse i.e. they are inverses of themselves
Irregular shapes	Regular shapes have sides that are all equal and interior (inside) angles that are all equal. Irregular shapes have sides and angles of any length and size.
isosceles	A triangle in which two sides have the same length and consequently two angles are equal. This definition includes an equilateral triangle as a special case – i.e. an equilateral triangle is isosceles
linear number sequence	In algebra, describing an expression or equation of degree one. Example: 2x + 3y = 7 is a linear equation. All linear equations can be represented as straight line graphs.
long division	A columnar algorithm for division by more than a single digit, most easily described with an example:

	432 ÷ 15 becomes  Answer: 28·8
Long multiplication	A columnar algorithm for performing multiplication by more than a single digit, again best illustrated by an example: 124 × 26 becomes  Answer: 3224
minuend	A number from which another number is to be subtracted.
mixed numbers	A whole number and a fractional part expressed as a common fraction. Example: 2 ¼ is a mixed number. Also known as a mixed fraction.
non-unit fractions	A non-unit fraction is a fraction with a numerator (top number) is greater than 1
numerator	In the notation of common fractions, the number written on the top – the dividend (the part that is divided). In the fraction ⅔, the numerator is 2.
obtuse angles	An angle greater than 90o but less than 180 o .
ordinal	A term that describes a position within an ordered set. Example: first, second, third, fourth … twentieth etc.

parallel lines	In Euclidean geometry, always equidistant. Parallel lines, curves and planes never meet however far they are produced or extended.
parallelogram	A quadrilateral whose opposite sides are parallel and consequently equal in length.
partition	1. To separate a set into subsets. 2. To split a number into component parts. Example: the two-digit number 38 can be partitioned into 30 + 8 or 19 + 19. 3. A model of division. Example: 21 ÷ 7 is treated as 'how many sevens in 21?
percentage	1. A fraction expressed as the number of parts per hundred and recorded using the notation %. Example: One half can be expressed as 50%; the whole can be expressed as 100% 2. Percentage can also be interpreted as the operator 'a number of hundredths of'. Example: 15% of Y means 15/100 × Y
perimeter	The length of the boundary of a closed figure.
perpendicular lines	A line or plane that is at right angles to another line or plane.
polygon	2D shapes that have straight sides.
Prime Numbers	A whole number greater than 1 that has exactly two factors, itself and 1. Examples: 2 (factors 2, 1), 3 (factors 3, 1). 51 is not prime (factors 51, 17, 3, 1).
prism	A solid bounded by two congruent polygons that are parallel (the bases) and parallelograms (lateral faces) formed by joining the corresponding vertices of the polygons. Prisms are named according to the base e.g. triangular prism, quadrangular prism, pentagonal prism etc. Examples:

	 If the lateral faces are rectangular and perpendicular to the bases, the prism is a right prism.
product	The result of multiplying one number by another. Example: The product of 2 and 3 is 6 since 2 × 3 = 6.
proper fractions	A proper fraction has a numerator that is less than its denominator So ¾ is a proper fraction, whereas 4 /3 is an improper fraction (i.e. not proper).
quadrilaterals	A polygon with four sides.
quotient	The result of a division. Example: 46 ÷ 3 = 15⅓ and 15⅓ is the quotient of 46 by 3. Where the operation of division is applied to the set of integers, and the result expressed in integers, for example 46 ÷ 3 = 15 remainder 1 then 15 is the quotient of 46 by 3 and 1 is the remainder.
rectilinear	Bounded by straight lines. A closed rectilinear shape is also a polygon. A rectilinear shape can be divided into rectangles and triangles for the purpose of calculating its area.
reflex angles	An angle that is greater than 180o but less than 360°.
regroup	Rearrange numbers into groups by place value.
right angle	One quarter of a complete turn. An angle of 90 degrees. An acute angle is less than one right angle. An obtuse angle is greater than one right angle but less than two. A reflex angle is greater than two right angles.

right angle	One quarter of a complete turn. An angle of 90 degrees. An acute angle is less than one right angle. An obtuse angle is greater than one right angle but less than two. A reflex angle is greater than two right angles.
scale factor	For two similar geometric figures, the ratio of corresponding edge lengths
scalene	A triangle with no two sides equal and consequently no two angles equal.
scaling	To enlarge or reduce a number, quantity or measurement by a given amount (called a scale factor). e.g. to have 3 times the number of people in a room than before; to find a quarter of a length of ribbon; to find 75% of a sum of money.
short division	A compact written method of division. Example: 496 ÷ 11 becomes  Answer : 45 1 /11
sides	A line segment that forms part of the boundary of a figure. Also edge.
square centimetres	Symbol: cm2 . A unit of area, a square measuring 1 cm by 1 cm. 10000 cm2 = 1 m2
square metres	Symbol: m2 . A unit of area, a square measuring 1m by 1 m.
Square numbers	A number that can be expressed as the product of two equal numbers. Example 36 = 6 x 6 and so 36 is a square number or "6 squared". A square number can be represented by dots in a square array
standard units	Uniform units that are agreed throughout a community. Example: the metre is a standard unit of length. Units such as

	the hand span are not standard as they vary from person to person.
subitise	To instantly recognise the number of objects in a small group, without counting.
translation	A transformation in which every point of a body moves the same distance in the same direction. A transformation specified by a distance and direction (vector).
unit fractions	A fraction that has 1 as the numerator and whose denominator is a non-zero integer. Example: ½, ⅓
variables	A quantity that can take on a range of values, often denoted by a letter, x, y, z, t, … etc.
vertex vertices	The point at which two or more lines intersect. Plural: vertices.

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