

Maths Glossary of important vocabulary

KS1	
addend	a number to be added to another
addition	combining a selection of numbers together to get a sum or total, the inverse of subtraction
algebra	the part of mathematics that deals with generalised arithmetic
analogue clock	a clock with 12 equal divisions and two hands that rotate around the centre
angle	measure of rotation - the amount of rotation required to turn one line segment onto another where the two line segments meet at a point
anticlockwise	in the opposite direction from the travel of hands on a clock
array	an ordered collected of counters, numbers etc. in rows and columns
associative	addition and multiplication are associative $2 + 3 = 5$ is the same as $3 + 2 = 5$ etc. but subtraction and division are not
axis of symmetry	a line about which a shape is symmetrical
bar chart	a format for representing statistics - bars of equal width and the lengths of the bars are proportional to the results
binary operation	a rule for combining two numbers in a set to produce a third - addition, subtraction, multiplication and division
block graph	a simple format for representing statistical data - one block represents one observation
capacity	the volume of a material held in a vessel or container
cardinal number	denotes quantity
Carroll diagram	a sorting diagram which numbers or objects are classified as having a certain property or not having that property
categorical data	data arising from situations where categories are used
cent-	prefix meaning one hundredth
centilitre	unit of capacity - one hundredth of a litre - cl
centimetre	unit of linear measure - one hundredth of a metre - cm
chart	another word for table or graph
chronological	relating to events that occur in a time ordered sequence
circle	set of all points in a place which are at a fixed distance from the centre
circular	in the form of a circle related to the circle
clockwise	in the direction in which the hands of a clock travel
column graph	a bar graph where the bars are vertical
common fraction	a fraction where the numerator and denominator are both integers
commutative	a binary operation - addition and multiplication not subtraction and division
compare	when two entities are compared looking for points of similarity and difference.
composite shape	a shape formed by combining two or more shapes
concrete objects	objects that can be handled and manipulated
cone	3 dimensional shape with a circular base and a vertex
conjecture	an educated guess
consecutive	following in order
continuous data	data arising from measurements taken on a continuous variable
corner	a point where two or more lines meet

count	the act of assigning one number name to each of a set of objects to determine how many there are
counter example	when a hypothesis or general statement is offered, an example that clearly disproves it
cube	a three dimensional figure with 6 identical square faces
cuboid	a three dimensional figure with 6 rectangular faces
cylinder	a three dimensional object - circular faces with a curved surface joining them
2D 3D	2 dimensional (lies in a plane) and 3 dimensional (occupies space)
data	information of quantitative nature consisting of counts or measurements
denomination	the face value of coins
diagram	a picture, geometric figure or a representation
difference	in maths different means the numerical difference between two numbers or sets of objects
digit	one of the symbols of a number system - 0 - 9
digital clock	a clock that displays the time as hours and minutes
directed number	a number having a direction as well as a size
direction	the orientation of a line in space
divide	to carry out the operation of division
dividend	the number that is divided
division	an operation on numbers - sharing or grouping
double	to multiply by 2 the number that is twice another
edge	a line segment, joining two vertices of a figure
equal	symbol = - means having the same value as
equivalent fractions	fractions with the same value as another
even number	an integer that is divisible by 2
exterior angle	of a polygon, the angle formed outside between one side and the adjacent side
face	one of the flat surfaces of a solid shape
facts	multiplication, division, addition and subtraction facts
fluency	conceptual understanding, procedural fluency and knowledge of facts
fraction	the result of dividing one integer by a second integer
frequency	the number of times an event occurs
general statement	a statement that applied correctly to all relevant cases
generalise	to formulate a general statement
geometrical	the aspect of mathematical concerned with the properties of shape
gram	g - unit of mass
hour	a unit of time - 1 hour = 60 mins
hundred square	a 10 by 10 square grid numbered 1 to 100
inequality	when one number is not equal to another
infinite	always bigger than any number thought of
inverse operations	eg addition and subtraction/multiplication and division
kite	a quadrilateral with two pairs of equal adjacent sides
length	the extent of a line segment between two points
line	a set of adjacent points that has length but no width
litre	l - a metric unit for volume
mass	a characteristic of a body - relating to the amount of matter within it
maximum value	the greatest value
measure	the size of an agreed unit

	verb - to find the size
measuring tools	these record numerical quantities of continuous variables
mental calculation	calculations that are carried out mentally
minimum value	least value
minus	-
minute	unit of time 1 minute = 60 seconds
missing number problems	eg $7 = \underline{\quad} - 9$
multiple	for any integers a and b, a is a multiple of b if a third integer c exists so that $a = bc$
multiplicand	a number to be multiplied by another
multiplication	$\times 3 \times 4 = 3 + 3 + 3 + 3$
multiplication table	an array setting out sets of numbers that multiply together
multiply	carry out the process of multiplication
notation	a convention for recording mathematical ideas
number bonds	a pair of numbers with a particular total
number line	a line where numbers are represented by points upon it
number sentence	a mathematical sentence involving numbers
number square	a square grid in which cells are numbered in order
number track	a numbered track along which counters might be moved
numeral	a symbol used to denote a number
oblong	non square rectangle
octagon	a polygon with 8 sides
operation	
ordinal number	a term that describe a position within an ordered set
partition	separate a set into subsets split a number into component parts
pattern	a systematic arrangement of numbers, shapes etc
pentagon	a polygon with 5 sides
pictogram	a format for representing statistical information using pictures to represent objects
place value	the value of a digit that relates to its position or place in a number
plus	+
polygon	a closed plane figure bounded by straight lines
position	location as specified by a set of coordinates in a plane or in full 3 dimensional space
pound sterling	£ a unit of money
prism	a solid bounded by two congruent polygons that are parallel and parallelograms formed by joining the corresponding vertices of the polygons
product	the result of multiplying one number by another
property	any attribute
pyramid	a solid with a polygon as the base and one other vertex
quadrilateral	a polygon with 4 sides
quantity	something that has a numerical value
quarter turn	a rotation through 90°
rectangle	a parallelogram with an internal angle of 90° , opposite sides are equal
relation	a common property of 2 or more items
repeated addition	the process of repeatedly adding the same number or amount

repeated subtraction	the process of repeatedly subtracting the same number or amount
rotation	a transformation of the whole plane around a fixed point
rule	generally a procedure for carrying out a process
score	to earn points or goals in a competition
second	a unit of time ordinal number
sequence	a succession of terms formed according to a rule
set	a well-defined collection of objects
share	one model from the process of division
side	a line segment that forms part of the boundary of a figure
sign	a symbol used to denote an operation
simple fraction	a fractions where the numerator and denominator are both integers
sort	to classify a set of entities into specified categories
square	a quadrilateral with four equal sides and four right angles the square of a number is the product of the number and itself
standard unit	uniform units
subtract	carry out the process of subtraction
subtraction	the inverse operation to addition
subtrahend	a number to be subtracted from another
sum	the result of one or more additions
surface	a set of points defining a space in two or three dimensions
symbol	a letter numeral or other mark that represents a number
symmetry	reflection along a point
table	an orderly arrangement of information, numbers or letter usually in rows and columns
take away	subtraction as reduction
tally	make marks to represent objects counted - cross the 5 th
temperature	a measure of hotness of a body - measure by a thermometer or other form of heat sensor - unit °C or °F
time	
total	the sum found by adding
triangle	a polygon with three sides
triangular number	a number that can be represented by a triangular array of dots
turn	a rotation around a point
unit	a standard used in measuring
unit fraction	a fraction that has 1 as the numerator and whose denominator is a non 0 integer
vertex	the point at which two or more line intersect
vertical	at right angles to the horizontal plane the up down direction on a graph or map
volume	a measure of three dimensional space
weight	the weight of a body is the force exerted on the body by the gravity of the earth
zero	0

KS2	
acute angle	an angle between 0° and 90°.
angle at a point	the complete angle all the way around a point is 360°

angle at a point on a line	the sum of the angles at a point on a line is 180°
approximation	a number or result that is not accurate
area	a measure of the size of any plane surface - measured in cm^2 or m^2
average	measure of central tendency which represents a set of data
axis	a fixed reference line from which distances or angles are taken
brackets	symbols used to group numbers in arithmetic or letters and numbers in algebra - indicates certain operations have priority
cartesian coordinate system	a system used to define the position of a point in two or three dimensional space
centre	middle point of a line or circle
circumference	the distance around a circle - $2\pi r$
column	a vertical arrangement
column addition or subtraction	a formal method of setting out addition or subtraction
common factor	a number which is a factor of two or more other numbers
common multiple	an integer which is a multiple of a given set of integers
compasses	an instrument for constructing circles
compensation	a mental or written calculation strategy where one number is rounded to make the calculation easier
complement	in addition, a number and its complement have a given total
convert	changing from one quantity or measurement to another
coordinate	one or more numbers or coordinates to determine the position of a point in space
correspondence problems	correspondence problems are those in which m objects are connected to n objects
cross section	a section in which the plane that cuts is at a right angle to the axis
cube number	a number that can be expressed as the product of three equal integers
cube root	a value or quantity whose cube is equal to a given quantity
cubic centimetre	a unit of volume cm^3
cubic metre	a unit of volume m^3
curved surface	a curved boundary of a 3d solid
decimal	relating to the base ten, decimal point is placed at the right of the ones column, each column after is a decimal place
decimal fraction	tenths, hundredths, thousandths etc.
decimal system	the common system of number based upon powers of ten
degree	the most common unit of measurement for angle
degree of accuracy	a measure of the precision of a calculation
denominator	the number written below the line in the fraction
diagonal	a line segment joining any two non-adjacent vertices of a polygon
diameter	any of the chords of a circle or sphere that pass through the centre
dissection	to cut into parts
distance between	a measure of the separation of two points
distributive	one binary operation is a distributive over another binary operation
divisibility	the property of being divisible by a given number
divisible	a whole number is divisible by another if there is no remainder after division
dodecahedron	a polyhedron with 12 faces
efficient methods	a means of calculation that achieves a correct answer with as few steps as possible

equivalent expression	a numerical or algebraic expression which is the same as the original
estimate	a rough or approximate answer
evaluate	find the value of a numerical or an algebraic expression
exchange	change a number or expression for another of equal value
expression	a mathematical form expressed symbolically
factor	when a number can be express as the product of two numbers
factorise	to express a number or a polynomial as a product of its factors
foot	ft. - an imperial measure of length - one foot = 12 inches 3 foot = 1 yard 1 foot = approx. 30cm
formula	an equation linking sets of physical variables
gallon	gal - an imperial measure of volume 1 gallon = 4 quarts = 8 pints
graph	a diagram showing a relationship between variables
grid	a lattice created with two sets of parallel lines
heptagon	a polygon with 7 sides and 7 edges
hexagon	a polygon with 6 sides and 6 edges
horizontal	parallel to the horizon
icosahedron	a polyhedron with 20 faces
imperial unit	a unit of measurement
improper fraction	a numerator that is greater than the denominator
inch	in - imperial unit of length 12 inches = 1 foot 36 inches = 1 yard 1 inch = approx. 2.54cm
index notation	the notation in which a product such as $a \times a \times a = a^3$
integer	any of the positive or negative whole numbers
interpret	draw out the key mathematical features of a graph
interval	all possible points in a closed continuous interval between 0 and 1
kilo	one thousand
kilogram	kg - 1kg = 1000g
kilometre	km 1km = 1000m
level of accuracy	the degree of precision in the measurement of a quantity
long division	a columnar algorithm for division
long multiplication	a columnar algorithm for multiplication
mean	mean is a set of discrete data is a sum of quantities divided by the number of quantities
mensuration	geometric figures - the process of measuring or calculating angles, lengths, areas and volumes
metre	m
metric unit	unit of measurement in the metric system
mile	imperial measure of length - 1 mile = 1760 yards 5 miles approx. 8 km
millilitre	ml
millimetre	mm
mixed fraction	a whole number and a fractional part expressed as a common fraction
mixed number	a whole number and a fractional part expressed as a common fraction
multiplicative reasoning	capacity to work flexibly with the concepts of multiplication
natural number	counting numbers
near double	nearly a double
negative integer	an integer less than 0
negative number	a number less than 0

net	a plane figure composed of polygons which by folding and joining can form a polyhedron
numerator	the number written above the line on the fraction
octahedron	a polyhedron with 8 faces
odd number	an integer that has a remainder of 1 when divided by 2
operator	a mathematical operation
order of magnitude	the approximate size, often given as a power of 10
order of operation	BIDMAS, BODMAS - the order in which different mathematical operations are applied
origin	a fixed point from which measurements are taken
ounce	oz. - imperial unit of mass 16 ounces = 1 pound 1 ounce approx. 28g
parallel	lines, curves or planes that are equidistant
parallelogram	a quadrilateral whose opposite sides are parallel
percentage	a fraction expressed as a number of parts per hundred and recorded using %
perimeter	the length of the boundary of a closed figure
pie chart	a form of presentation of statistical information
pint	imperial measure of volume 8 pints = 4 quarts = 1 gallon
place holder	the number 0 is used as a place holder to denote the absence of a particular power of 0
plot	the process of marking points
point	an element that has position but no magnitude
polyhedron	a closed solid figure bounded by surfaces that are polygonal
positive number	a number greater than 0
pound (mass)	lb. - an imperial unit of mass 14lb = 1 stone 1lb approx. 455g
power (of ten)	a fractional power represents a root a negative power represents the reciprocal
prime factor	the factors of a number that are prime
prime factor decomposition	the process of expressing a number as the product of factors that are prime numbers
prime number	a whole number greater than 1 that has exactly two factors - itself and 1
priority of operations	multiplication and division should be done before addition and subtraction unless brackets are used
proportion	a part to whole comparison
proportional reasoning	using ratio and proportion to solve problems
protractor	an instrument for measuring angles
quadrant	one of the four regions into which a plane is divided
quotient	the result of a division
radius	the distance from the centre of a circle to any point on the circle
rate	a measure of how quickly one quantity changes in comparison to another quantity
ratio	a part to part comparison
rational number	a number that is an integer or that can be express as a fraction whose numerator and denominator are integers and whose denominator is not a zero
reciprocal	the multiplicative inverse of any non-zero number
rectilinear	bounded by straight lines
recurring decimal	a decimal fraction with an infinitely representing digit

reflection	in 2d a transformation of the whole plane involving a mirror line or line of symmetry
reflection symmetry	a 2d shape that has reflection symmetry about a line
regular	describing a polygon, having all sides equal and all internal angles equal
remainder	in the context of division requiring a whole number answer - the amount remaining after the operation
representation	a particular form in which the maths is presented
rhombus	a parallelogram with all sides equal
right	use as an adjectives, right angled or erect
right angle	one quarter of a complete turn, an angle of 90 degrees
Roman numerals	I = 1 V = 5 X = 10 L = 50 C = 100 D = 500 M = 1000
rotation symmetry	a 2d shape has rotation symmetry around a point if an identical looking shape in the same position is produced by a rotation
round	express to a required degree of accuracy
sample	a subset of a population
scale	to enlarge or reduce a number, quantity or measurement
scale factor	the ratio of corresponding edge lengths
set square	a drawing instrument for constructing parallel lines
short division	a compact method of division
short multiplication	simple multiplication by a one digit number
simplify	reduce a fraction to its simplest form
sphere	a closed surface, in three dimensional space consisting of all the points that are a given distance from a fixed point
square centimetre	cm ²
square metre	m ²
subtraction by decomposition	a method of subtraction where the number to be subtracted from is re-partitioned
terminating decimal	a decimal fraction that has a finite number of digits
tetrahedron	a solid with four triangular faces
transformation	a change that is a change in the position or direction of the coordinate axes
translation	a transformation in which every point of a body moves the same distance in the same direction
trapezium	a quadrilateral with exactly one pair of sides parallel
vertically opposite angles	the pair of equal angles between two intersecting straight lines
vulgar fraction	a fraction in which the numerator and denominator are both integers
yard	yd. 1 yard = 3 feet = 36 inches