



Reception

Concept	Definition	Examples
Above	Used to describe a higher position than another object.	The Maths Meetings board is <b>above</b> the sink.
Add	Carry out the process of addition.	I can <b>add</b> two numbers together to find a total.
Addition	The operation to combine at least two numbers or quantities to form a further number or quantity, the sum or total. Addition is the inverse operation to subtraction.	Three plus seven is equal to ten. This is an <b>addition</b> equation.
Array	An ordered collection of counters, numbers etc. in rows and columns.	It is arranged in an <b>array</b> of 9
Altogether	In total.	That will be £2 <b>altogether</b> please.
Balance	A measuring tool used to weigh objects. It has two dishes hanging on a bar. Both dishes will be level when the contents weigh the same. Also, as a verb, indicates equivalence and equality.	The objects in the <b>balance</b> are unequal in weight because the dish on the right side is lower down than the dish on the left side. The two objects <b>balance</b> which means they have the same mass.
Before	In front of or prior to.	The number '3' comes <b>before</b> '5' on the number line.
Below	Used to describe a lower position than another object.	The sink is <b>below</b> the Maths Meetings board.
Between	Indicates a position in relation to two other places or objects on either side.	The teacher is standing <b>between</b> two tables.
Capacity	The amount of liquid a container can hold.	This cup is full to <b>capacity</b> because it cannot hold any more water.
Circle	The name of a 2-D shape. A circle has a curved side.	
Clock	A tool used to measure time.	The <b>clock</b> shows us that the time is now 2 o'clock.
Compare	Look for similarities and/or differences between at least two objects or sets.	I can <b>compare</b> these two sets – this set has more.
Corner	A point where two or more lines meet. The correct mathematical term is vertex (vertices).	The table has four corners (vertices).
Cost	A monetary value assigned to a good or service.	This apple costs 10p. What coin could I use to pay for it?
Count	Assigning one number name to each of a set of objects to determine how many there are.	I counted the children in the group – there are four so we will need four pencils.
Cube	A 3-D shape with six identical square faces.	
Cuboid	A 3-D shape with six rectangular faces.	
Curved surface	A non-plane surface of a 3-D shape. Both cones and cylinders have curved surfaces.	The cone has a <b>curved</b> surface.
Cylinder	A 3-D shape with two circular faces joined by a curved surface.	
2-D	Abbreviation for two-dimensional. A figure is two-dimensional if it lies on a plane.	A square is a <b>2-D</b> shape.
3-D	Abbreviation for three-dimensional. A solid is three-dimensional and occupies space.	A cylinder is a <b>3-D</b> shape.

Describe	To express mathematical features, qualities and details in words.	Can you <b>describe</b> the properties of a cube?
Difference	The numerical difference between two numbers or sets of objects. It is found by comparing the quantity of one set of objects with another.	The <b>difference</b> between ten and six is four.
Direction	The orientation of a line in space.	Which <b>direction</b> should we jump – forwards or backwards?
Distance	A measure between two points or things.	The <b>distance</b> between my house and the school is longer than that between the school and the train station.
Double	To multiply by two or add a value to itself.	Ten is <b>double</b> five.
Edge	A line segment joining two vertices of a plane figure (2-D shape) and the intersection of two plane faces (in a 3-D shape).	A triangle has three <b>edges</b> and a cube has 12 <b>edges</b> .
Empty	Containing nothing. Most commonly used in the context of measures.	There is no more water left in the jug – it is <b>empty</b> .
Equal	Indicates equivalence between two values and can be expressed with the symbol '='. The symbol is read as 'is equal to' which means the same as. Expressions on either side of the symbol have the same value.	My sets are <b>equal</b> because there are four bears in this set and there are four bears
Face	One of the plane surfaces of a solid shape.	A cube has six <b>faces</b> .
Fewer	A lesser amount – used when counting discrete objects, i.e. countable objects such as, pens, teddies, counters, etc.	There are <b>fewer</b> buttons on my coat than yours.
First	Comes before all others in time or position.	<b>First</b> I brush my teeth. Then I go to bed.
Flat	A level surface.	The table has a <b>flat</b> rectangular surface.
Full	Contains/holds as much or as many as possible; has no empty space.	The juice carton is not <b>full</b> because I drank some.
Group	To make equal size groups. This is one model for division.	I will <b>group</b> the crayons equally so that each person gets two.
Half	One of two equal parts of a shape, quantity or object.	I have shared the dolls into two equal groups – I have <b>half</b> and you have <b>half</b> .
Last	Comes after all others in time or order.	Rory is the <b>last</b> person in the line.
Length	A linear measurement.	The <b>length</b> of my snake is shorter than yours.
Less	A smaller amount or not as much.	I have 15p and you have 7p. you have <b>less</b> money than me.
Line	A set of adjacent points that has length but no width.	I have drawn a <b>line</b> matching the number four with the four ducks.
Long	An adjective used to describe length.	I have a <b>long</b> piece of string.
Measure	To find the size of something in a given unit.	How might we <b>measure</b> how much flour we need to bake a cake?
Minus	A name for the symbol '-', which denotes the operation of subtraction.	Three <b>minus</b> one is equal to two.
More	A greater amount.	I have six apples and you have two. I have <b>more</b> .
Next	Comes immediately after the present one in order.	The <b>next</b> shape in my pattern is a square.
Number bond	A pair of numbers with a given total.	Five and four make a <b>number bond</b> to nine.
Number line	A linear, continuous representation of number. Each number occupies a point on the line, and there is an equal interval between each number.	This <b>number line</b> starts at zero and ends at ten.
Number track	A linear, discrete representation of number. Each number is positioned in a square on the track.	I can count from one to ten, moving a counter along this number track.

Order	Describes the placement of items according to given criteria or in a pattern. As a verb, to place items according to given criteria or in a pattern.	I have ordered the bears from smallest to biggest.
Pair	A set of two things used together.	Socks come in a pair – one for each foot.
Pattern	A systematic arrangement of numbers, shapes or other elements according to a rule.	The pattern is red, blue, red, blue, red blue.
Plus	The word representing the operation of addition. It is also the name for the symbol '+’.	Five apples plus two apples are equal to seven apples.
Point	A point where two or more lines meet. The correct mathematical term is vertex (vertices).	The triangle has three corners (vertices).
Rectangle	A quadrilateral with four right angles.	
Same	Objects that have the same qualities, possibly colour, shape, size, quantity or position	I have grouped them together because they have the <b>same</b> colour
Second	1. A unit of time. 2. An ordinal number.	Mohsin is <b>second</b> in the line today.
Sequence	A series of numbers or other elements which follow a rule.	The number 3 is next in the <b>sequence</b> because each number is one less than the one before.
Set	A defined group of objects, numbers or other elements.	I have placed all the purple counters in this <b>set</b> because they are all the same colour.
Share	To distribute fairly between a given number of recipients. This is one model for division.	I will <b>share</b> the crayons equally between the people at the table.
Short	An adjective used to describe length.	This string will not reach to the door. It is too <b>short</b> .
Side	A straight line that forms part of the boundary of a shape.	This shape has four straight <b>sides</b> .
Size	An element’s overall dimensions or magnitude.	The <b>size</b> of my shoe is smaller than my teacher’s.
Sort	To organise a set of elements into specified categories.	I will <b>sort</b> these objects based on their size.
Square	A quadrilateral with four equal length sides and four right angles.	It has a <b>square</b> face.
Square number	A number that can be arranged in a square array.	9 is a square number because it has three rows of three in the <b>array</b> .
Straight	A line or movement uniform in direction, without bends or curves.	The walls of the school are <b>straight</b> .
Subtract	Carry out the process of subtraction.	Nine <b>subtract</b> three is equal to six.
Subtraction	The inverse operation to addition.	We are taking some away so it is a <b>subtraction</b> question.
Sum	The result of one or more additions.	The <b>sum</b> of five and three is eight.
Take away	Used in the reduction structure of subtraction. To remove a number of items from a set.	He ate three of the sweets so we need to <b>take away</b> three counters.
Tall	Measuring a specific distance from top to bottom.	Our class teacher is not as tall as our head teacher.
Time	Related to duration. Measured in seconds, minutes, hours, days, weeks, months, years etc.	After lunch it will be time for P.E.
Total	The sum found by adding.	There are a total of five people at this table.
Triangle	A polygon with three sides.	

Weight	The force exerted on an object by gravity. Weight therefore changes with a change in gravitational force. Used interchangeably with mass until KS2.	The <b>weight</b> of this book is heavier than the pencil.
Zero	The number before one. It is neither positive nor negative.	<b>Zero</b> comes before one on the number track.

## KS1

### KS1 General Vocabulary

Concept	Definition
Bar models	A visual strategy to help solve number problems using different sized rectangles to represent numbers. The rectangles or 'bars' are proportional so that a larger number in a problem is represented by a larger bar. It does not provide the answer but gives the user an understanding of what calculation is needed to find the answer.
Calculate	To compute or work out mathematically.
Concrete objects	Objects that can be handled and manipulated to support understanding of the structure of a mathematical concept. Materials such as Dienes (Base 10 materials), Cuisenaire, Numicon, pattern blocks are all examples of concrete objects.
Diagram	A picture, a geometric figure or a representation.
Efficient	Well-organised, e.g. I will use my number bonds knowledge to calculate $22 + 7$ efficiently. I know that $2 + 7$ is equal to 9, so the answer is 29. That's more efficient than counting on seven.
Facts	The word 'fact' is related to the four operations and the instant recall of knowledge about the composition of a number. i.e. an addition fact for 20 could be $10+10$ ; a subtraction fact for 20 could be $20-9=11$ . A multiplication fact for 20 could be $4 \times 5$ and a division fact for 20 could be $20 \div 5 = 4$ .
Fluency	To be mathematically fluent, one must have a mix of conceptual understanding, procedural fluency and knowledge of facts to enable you to tackle problems appropriate to your stage of development confidently, accurately and efficiently.
Mental calculation	Referring to calculations that are largely carried out mentally, but may be supported with a few simple written jottings.
Missing number problems	A problem of the type $7 = \square - 9$ .
Number line	A line where numbers are represented by points upon it.
Number sentence	A mathematical sentence involving numbers. Examples: $3 + 6 = 9$ .
Number track	Numbered track along which counters might be moved. The number in a region represents the number of single moves from the start.
Part-whole diagram	A visual strategy to help solve addition and subtraction problems. A whole object can be split into two or more parts in many different ways. The parts might look different; each part will be smaller than the whole, and the parts can be combined to make the whole.
Pictorial representations	Pictorial representations enable learners to use pictures and images to represent the structure of a mathematical concept.
Represent	To express or show a mathematical concept using words, numerals and symbols, pictures, diagrams, or concrete manipulatives.

### KS1 – Number and Place Value

Concept	Definition
Approximate	The number is not exact but it is close.
Cardinal number	A cardinal number denotes quantity, as opposed to an ordinal number which denotes position within a series. $1, 2, 5, 23$ are examples of cardinal numbers.
Column	A vertical arrangement of numbers or objects, e.g. 23 has two tens – I will place them into the tens column.
Compare	In mathematics when two entities (objects, shapes, curves, equations etc.) are compared one is looking for points of similarity and points of difference as far as mathematical properties are concerned.

Consecutive	Following in order. Consecutive numbers are adjacent in a count. Examples: 5, 6, 7 are consecutive numbers. 25, 30, 35 are consecutive multiples of 5.
Count	The act of assigning one number name to each of a set of objects (or sounds or movements) in order to determine how many objects there are.
Digit	Any number from 0 to 9 (inclusive).
Estimate	An appropriately accurate guess, depending on the context and numbers involved.
Even number	A number with a 0, 2, 4, 6 or 8 in the ones and therefore exactly divisible by two.
Greater than	An inequality between numbers. The symbol used to represent greater than is an arrow pointing towards the smallest number.
Inequality	When one number, or quantity, is not equal to another. The inequality signs in use are: < means 'less than'; $A < B$ means 'A is less than B' > means 'greater than'; $A > B$ means 'A is greater than B'
Less	A smaller amount or not as much.
Less than	An inequality between numbers. The symbol used to represent less than is an arrow pointing towards the smallest number.
More	A greater amount.
Numeral	A symbol used to denote a number.
Odd number	A number that when divided by two leaves a remainder of one.
Order	Describes the placement of items according to given criteria or in a pattern. As a verb, to place items according to given criteria or in a pattern.
Ordinal number	A term that describes a position within an ordered set. Example: first, second, third, fourth ... twentieth etc.
Partition	To split a number into component parts. Example: the two-digit number 38 can be partitioned into $30 + 8$ or $19 + 19$ .
Pattern	A systematic arrangement of numbers, shapes or other elements according to a rule.
Place value	The value of a digit that relates to its position or place in a number. Example: in 1482 the digits represent 1 thousand, 4 hundreds, 8 tens and 2 ones respectively.
Quantity	Something that has a numerical value, for example: 5 bananas.
Sequence	A succession of terms formed according to a rule. There is a definite relation between one term and the next and between each term and its position in the sequence. Example: 1, 4, 9, 16, 25 etc.
Sign/ symbol	A symbol used to denote an operation. Examples: addition sign +, subtraction sign -, multiplication sign $\times$ , division sign $\div$ , equals sign = etc.
Sort	To classify a set of entities into specified categories.
Zero	Nought or nothing; zero is the only number that is neither positive nor negative.

### KS1 – Addition and Subtraction

Concept	Definition
Addend	A number to be added to another.
Addition	The operation to combine at least two numbers or quantities to form a further number or quantity, the sum or total. Addition is the inverse operation to subtraction.
Add	Carry out the process of addition
Altogether	In total.
Column addition/ subtraction	A formal method of setting out an addition or a subtraction in ordered columns with each column representing a decimal place value and ordered from right to left in increasing powers of 10. With addition, more than two numbers can be added together using column addition, but this extension does not work for subtraction.

Commutative	Addition has the property of commutativity – when two numbers are added, this can be done in any order and the same answer will be obtained: $3 + 2 = 5$ , $2 + 3 = 5$ . Subtraction is not commutative.
Difference	The numerical difference between two numbers or sets of objects. It is found by comparing the quantity of one set of objects with another.
Equal	Symbol: =, read as 'is equal to' or 'equals'. and meaning 'having the same value as'. Example: $7 - 2 = 4 + 1$ since both expressions, $7 - 2$ and $4 + 1$ have the same value, 5.
Exchange	Change a number or expression for another of equal value. The process of exchange is used in some standard compact methods of calculation. It is the process of making groups of tens when adding or subtracting two digit numbers (or more) and is another name for carrying and borrowing.
Inverse operations	The calculation which is opposite to a given calculation, and effectively reverses it. Addition is the inverse of subtraction. So for the calculation $4 + 3 = 7$ , the following calculations also apply: $3 + 4 = 7$ (commutativity), $7 - 4 = 3$ , $7 - 3 = 4$ .
Minus	A name for the symbol $-$ , representing the operation of subtraction.
Number bond	A pair of numbers with a particular total, e.g. number bonds for ten are all pairs of whole numbers with the total 10.
Plus	A name for the symbol $+$ , representing the operation of addition.
Subtract	Carry out the process of subtraction.
Subtraction	The inverse operation to addition. Finding the difference when comparing magnitude. Take away.
Subtrahend	A number to be subtracted from another.
Sum	The result of one or more additions.
Take away	1. Subtraction as reduction 2. Remove a number of items from a set.
Total	The sum found by adding.

### KS1 – Multiplication, Division & Fractions

Concept	Definition
Array	An ordered collection of counters, numbers etc. in rows and columns.
Common fraction	A fraction where the numerator and denominator are both integers.
Commutative	Multiplication has the property of commutativity – when two numbers are multiplied, this can be done in any order and the same answer will be obtained: $4 \times 6 = 24$ , $6 \times 4 = 24$ . Division is not commutative.
Denominator	The number written at the bottom of a fraction. In a measure context, it indicates the number of equal parts into which the whole is divided.
Divide	To carry out the operation of division.
Dividend	In division, the number that is divided. E.g. in $15 \div 3$ , 15 is the dividend.
Division	Division can be sharing – the number to be divided is shared equally into the stated number of parts; or grouping – the number of groups of a given size is found. Division is the inverse operation to multiplication.
Double	To multiply by 2. Example: Double 13 is $(13 \times 2) = 26$ . The number or quantity that is twice another. Example: 26 is double 13.
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 $1/2$ .
Fraction	A part of a whole number, quantity or shape.
Group	To make equal size groups. This is one model for division.
Half	One of two equal parts of a shape, quantity or object.
Multiple	A multiple is a number that can be divided by another number a certain number of times without a remainder. In the number sentence $4 \times 5 = 20$ , 20 is a multiple of 4 and a multiple of 5.
Multiplicand	A number to be multiplied by another, e.g. in $5 \times 3$ , 5 is the multiplicand as it is the number to be multiplied by 3.

Multiplication	Finding how many altogether in a given number of equal sized groups. Represented by the symbol 'x'.
Multiply	Carry out the process of multiplication.
Near double	A 'near double' is one away from a double. Example: 27 is a near double of 13 and of 14. (N.B. spotting near doubles can be a useful mental calculation strategy e.g. seeing $25 + 27$ as 2 more than double 25).
Non-unit fraction	A fraction with a numerator greater than one.
Numerator	The number written at the top of a fraction. In a measure context, it indicates the specified number of parts out of the whole.
Product	The result of multiplying one number by another. Example: The product of 2 and 3 is 6 since $2 \times 3 = 6$ .
Quarter	One of four equal parts of a whole, quantity or object.
Repeated addition	The process of repeatedly adding the same number or amount. One model for multiplication. Example $5 + 5 + 5 + 5 = 5 \times 4$ .
Repeated subtraction	The process of repeatedly subtracting the same number or amount. One model for division. Example $35 - 5 - 5 - 5 - 5 - 5 - 5 - 5 = 0$ so $35 \div 5 = 7$ remainder 0.
Share (equally)	To distribute fairly between a given number of recipients. This is one model for division.
Unit fraction	A fraction that has 1 as the numerator and whose denominator is a non-zero integer. Example: $\frac{1}{2}$ , $\frac{1}{3}$

### KS1 – Measures

Concept	Definition
Analogue clock	A clock usually with 12 equal divisions labelled 'clockwise' from the top 12, 1, 2, 3 and so on up to 11 to represent hours.
Capacity	The amount of liquid a container can hold/ The volume of a material (typically liquid or air) held in a vessel or container. Units include litres, decilitres, millilitres; cubic centimetres ( $\text{cm}^3$ ) and cubic metres ( $\text{m}^3$ ). A litre is equivalent to 1000 $\text{cm}^3$ .
Centilitre	Symbol: cl. A unit of capacity or volume equivalent to one-hundredth of a litre.
Centimetre	Symbol: cm. A unit of linear measure equivalent to one hundredth of a metre.
Chronological	Relating to events that occur in a time ordered sequence.
Cost	A monetary value assigned to a good or service.
Digital clock	A clock that displays the time as hours and minutes passed, usually since midnight. Example: four thirty in the afternoon is displayed as 16:30.
Distance	A measure between two points or things.
Empty	Containing nothing.
Full	Contains/holds as much or as many as possible; has no empty space.
Gram	Symbol: g. The unit of mass equal to one thousandth of a kilogram.
Hour	A unit of time. One twenty-fourth of a day. 1 hour = 60 minutes = 3600 (60 x 60) seconds.
Kilogram	Symbol: kg. The base unit of mass. 1kg = 1000g.
Kilometre	Symbol: km. A unit of length. 1km = 1000m
Length	The extent of a line segment between two points.
Litre	Symbol: l. A metric unit used for measuring volume or capacity. A litre is equivalent to 1000 $\text{cm}^3$ .
Mass	This refers to the weight of an object. It is measured in grams (g) and kilograms (kg).
Measure	To find the size.
Metre	Symbol: m. The base unit of length.
Millilitre	Symbol: ml. One thousandth of a litre.
Millimetre	Symbol: mm. One thousandth of a metre.
Minute	Unit of time. One-sixtieth of an hour. 1 minute = 60 seconds.
Pence	Symbol p. A unit of money. 100p = £1.00.
Pound sterling (money)	Symbol £. A unit of money. £1.00 = 100 pence. £1 is commonly called a pound.

Scale	Equally spaced markings on a measuring device which can be read to quantify a measurement.
Temperature	A measure of the hotness of a body, measured by a thermometer or other form of heat sensor.
Time	Related to duration. Measured in seconds, minutes, hours, days, weeks, months, years etc.
Unit	A standard used in measuring e.g. the metre is a unit of length; the degree is a unit of turn/angle, etc.
Volume	A measure of three-dimensional space. Usually measured in cubic units; for example, cubic centimetres (cm <sup>3</sup> ) and cubic metres (m <sup>3</sup> ).
Weight	The force exerted on an object by gravity. Weight therefore changes with a change in gravitational force. Used interchangeably with mass until KS2.

### KS1 – Geometry

Concept	Definition
Above	Used to describe a higher position than another object.
Angle	The amount of turn, measured in degrees.
Anticlockwise	In the opposite direction from the normal direction of travel of the hands of an analogue clock.
Axis of symmetry	A line dividing a shape into two symmetrical parts.
Below	Used to describe a lower position than another object.
Circle	The name of a 2-D shape. A circle has a curved side.
Clockwise	In the direction in which the hands of an analogue clock travel.
Cone	A 3-D shape with one circular plane face, which tapers to an apex.
Cube	A 3-D shape with six identical square faces.
Cuboid	A 3-D shape with six rectangular faces.
Curved surface	A non-plane surface of a 3-D shape. Both cones and cylinders have curved surfaces.
Cylinder	A 3-D shape with two circular faces joined by a curved surface.
2-D	Abbreviation for two-dimensional. A figure is two-dimensional if it lies on a plane.
3-D	Abbreviation for three-dimensional. A solid is three-dimensional and occupies space.
Direction	The orientation of a line in space. e.g. north, south, east, west; up, down, right, left are directions.
Edge	A line segment joining two vertices of a plane figure (2-D shape) and the intersection of two plane faces (in a 3-D shape). Also known as a side.
Face	One of the flat surfaces of a solid shape. Example: a cube has six faces; each face being a square.
Half turn	A 180 degree rotation, i.e. 1/2 of a 360 degree or 'full' turn.
Heptagon	A polygon with seven sides and seven angles.
Hexagon	A polygon with six sides and six angles.
Horizontal	Horizontal refers to planes and line segments that are parallel to the horizon.
Kite	A quadrilateral with two pairs of equal, adjacent sides whose diagonals consequently intersect at right angles.
Oblong	Sometimes used to describe a non-square rectangle – i.e. a rectangle where one dimension is greater than the other.
Octagon	A polygon with eight sides.
Pattern	A systematic arrangement of numbers, shapes or other elements according to a rule.
Pentagon	A polygon with five sides and five interior angles.
Polygon	2D shapes with straight, fully closed sides. A polygon can have any number of sides. The most common are triangles, squares, hexagons etc.
Position	Location as specified by a set of coordinates in a plane or in full 3-dimensional space.
Prism	A prism is a 3-D solid with two identical, parallel bases and otherwise rectangular faces.
Property	Any attribute. Example: One property of a square is that all its sides are equal.
Pyramid	A 3-D shape with a polygonal base and otherwise triangular faces, which form edges with the base, and which meet at an apex.

Quadrilateral	A polygon with four sides.
Quarter turn	A rotation through 90°, usually anticlockwise unless stated otherwise.
Rectangle	A quadrilateral with four right angles.
Right angle	An angle of 90 degrees.
Rotation	The act of rotating about an axis/centre.
Sphere	A 3-D shape with a continuous surface, which is at all points equidistant from its centre. It has an infinite number of flat faces and straight edges.
Square	A quadrilateral with four equal length sides and four right angles.
Straight	A line or movement uniform in direction, without bends or curves.
Surface	An outer boundary of a 3-D object.
Symmetry	A shape is symmetrical when it fits exactly onto itself when folded in half.
Triangle	A polygon with three sides.
Turn	A rotation about a point: a quarter turn is a rotation of 90°. A half turn is a rotation of 180°, a whole turn is a rotation of 360°.
Vertex/Vertices	The point at which two or more lines intersect. Also known as corners.
Vertical	At right angles to the horizontal plane. The up-down direction on a graph or map.

### KS1 – Statistics

Concept	Definition
Bar chart	A format for representing statistical information. Bars, of equal width, represent frequencies and the lengths of the bars are proportional to the frequencies (and often equal to the frequencies). Sometimes called bar graph. The bars may be vertical or horizontal depending on the orientation of the chart.
Block graph	A simple format for representing statistical information. One block represents one observation. Example: A birthday graph where each child places one block, or colours one square, to represent himself / herself in the month in which he or she was born.
Carroll diagram	A sorting diagram named after Lewis Carroll, author and mathematician, in which numbers (or objects) are classified as having a certain property or not having that property.
Categorical data	Data arising from situations where categories (unordered discrete) are used. Examples: pets, pupils' favourite colours.
Chart	Another word for a table or graph.
Column graph	A bar graph where the bars are presented vertically.
Data	Information of a quantitative nature consisting of counts or measurements.
Frequency	The number of times an event occurs; or the number of individuals (people, animals etc.) with some specific property.
Pictogram	Suitable pictures, symbols or icons are used to represent objects. For large numbers one symbol may represent a number of objects and a part symbol then represents a rough proportion of the number.
Table	An orderly arrangement of information, numbers or letters usually in rows and columns.
Tally	Make marks to represent objects counted; usually by drawing vertical lines and crossing the fifth count with a horizontal or diagonal strike through.
Venn diagram	Two or more circles which represent given sets and intersect.

## KS2

### KS2 - General

Concept	Definition
Efficient methods	A means of calculation (which can be mental or written) that achieves a correct answer with as few steps as possible.
Formal written methods	Pupils should only use formal written methods for calculations that cannot be efficiently calculated using mental strategies (with or without jottings).
Interpret	Draw out the key mathematical features of a graph, or a chain of reasoning, or a mathematical model, or the solutions of an equation, etc.

### KS2 – Number and Place Value

Concept	Definition
Decimal	Most commonly used synonymously with decimal fractions where the number of tenths, hundredths, thousandths, etc. are represented as digits following a decimal point. The decimal point is placed at the right of the ones column. Each column after the decimal point is a decimal place.
Negative number	A number that is less than zero.
Place holder	A place holder is a zero used in any place value column (that contains a value of zero) to clarify the relative positions of the digits in other places.
Positive number	A number that is greater than zero. Zero is neither positive nor negative.
Roman numeral	Roman numerals are a system of symbols used to represent numbers that were developed and used by the Romans. They do not use a place value system.
Round	Approximate a number, normally to the nearest multiple of ten, to make it easier with which to calculate.

### KS2 – Addition and Subtraction

Concept	Definition
Associative law	No matter how the parts in an addition equation are grouped, the answer will be the same.
Column addition/ subtraction	A formal method of setting out an addition or a subtraction in ordered columns with each column representing a decimal place value and ordered from right to left in increasing powers of 10. With addition, more than two numbers can be added together using column addition, but this extension does not work for subtraction.
Compensation	A mental or written calculation strategy where one number is rounded to make the calculation easier. The calculation is then adjusted by an appropriate compensatory addition or subtraction. Examples: • $56 + 38$ is treated as $56 + 40$ and then 2 is subtracted to compensate.
Complement (in addition)	In addition, a number and its complement have a given total. Example: When considering complements in 100, 67 has the complement 33, since $67 + 33 = 100$ .

Decomposition	In this method the number to be subtracted from (the minuend) is re-partitioned, if necessary, in order that each digit of the number to be subtracted (the subtrahend) is smaller than its corresponding digit in the minuend.
Exchange	Change a number or expression for another of equal value. The process of exchange is used in some standard compact methods of calculation. It is the process of making groups of tens when adding or subtracting two digit numbers (or more) and is another name for carrying and borrowing.

### KS2 – Multiplication, Division & Fractions

Concept	Definition
Associative law	No matter how the parts in a multiplication equation are grouped, the answer will be the same.
Compensation	A mental or written calculation strategy where one number is rounded to make the calculation easier. $27 \times 19$ is treated as $27 \times 20$ and then 27 (i.e. $27 \times 1$ ) is subtracted to compensate.
Correspondence problems	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).
Decimal fraction	A fraction expressed in its decimal form.
Distributive law	The process whereby adding some numbers and then multiplying the sum gives the same answer as multiplying the numbers separately and then adding the products. For example, $3 \times (2 + 4) = (3 \times 2) + (3 \times 4)$ $3 \times 12 = (3 \times 10) + (3 \times 2)$
Divisible (by)	A whole number is divisible by another if there is no remainder after division and the result is a whole number. Example: 63 is divisible by 7 because $63 \div 7 = 9$ remainder 0. However, 63 is not divisible by 8 because $63 \div 8 = 7.875$ or 7 remainder 7.
Divisor	The number you divide by.
Equivalent	Equivalent means having the same value. Equivalent fractions have the same value.
Factor	A number, that when multiplied with one or more other factors, makes a given number.
Grid method	A written method used to teach children multiplication. It involves partitioning numbers into tens and units before they are multiplied.
Improper fraction	A fraction where the numerator is bigger than the denominator. These fractions are therefore greater than one whole.
Integer	A whole number that can be positive or negative.
Long division	A method used for dividing large numbers into groups or parts. Long division helps in breaking the division problem into a sequence of easier steps.
Long multiplication	A written method of multiplying numbers (usually a two- or three-digit number by another large number) by positioning the numbers into columns and breaking them down into a sequence of easy steps.
Mixed numbers	Numbers consisting of an integer and fractional part.
Proper fraction	A fraction with a value less than one.
Quotient	The result when the dividend is divided by the divisor. In $15 \div 3 = 5$ , 5 is the quotient.
Recurring decimal	A decimal fraction with an infinitely repeating digit or group of digits. Example: The fraction $\frac{1}{3}$ is the decimal 0.33333
Remainder	In the context of division requiring a whole number answer (quotient), the amount remaining after the operation. Example: 29 divided by 7 = 4 remainder 1.
Short division	A formal written layout where the quotient is calculated showing only one written step.
Short multiplication	A formal written layout where the multiplier is usually 9 or less.
Simplify	To write a number or equation in its simplest form.

### KS2 – Measures

Concept	Definition
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Area	The space a surface takes up inside its perimeter. Area is always measured in square units.
Convert	To change from one unit of measurement to another.
Degree	The most common unit of measurement for angle. One whole turn is equal to 360 degrees, written 360°
Perimeter	The perimeter of a 2-D shape is the total distance around its exterior.
Square centimetre	A unit of measure for area equal to a square with the dimensions 1 cm by 1cm.

### KS2 – Geometry

Concept	Definition
Acute angle	An angle that is smaller than a right angle.
Composite shape	A shape formed by combining two or more shapes.
Coordinate	The position of a point, usually described using pairs of numbers.
Equilateral	Having all sides the same length.
Dodecahedron	A polyhedron with twelve faces. The faces of a regular dodecahedron are regular pentagons. A dodecahedron has 20 vertices and 30 edges.
Isosceles	Having two sides of equal length. Isosceles triangles have two equal sides; isosceles trapezia have two equal, non-parallel sides.
Irregular	In geometry, irregular is a term used to describe shapes that are not regular.
Obtuse angle	An angle that is greater than a right angle but less than 180 degrees.
Parallel	Line segments that can be described as parallel must be on the same plane and will never meet, regardless of how far either or both line segments are extended.
Parallelogram	A 2-D shape that has two pairs of parallel sides and equal opposite angles.
Perpendicular	A pair of line segments (or surfaces) can be described as perpendicular if they intersect at (or form) a right angle.
Point	The precise location of a position on a 2-D plane.
Reflex angle	An angle that is greater than 180°.
Regular	Describing a polygon, having all sides equal and all internal angles equal.
Rhombus	An equilateral parallelogram with four equal length sides.
Right angle	An angle of 90 degrees.
Scalene	A scalene triangle has three unequal sides and three unequal angles.
Square-based pyramid/ Triangle-based pyramid	A pyramid is a 3-D shape with a 2-D shape (which gives the pyramid its name) as a base and triangular faces that taper to a point called a vertex or apex.
Trapezium	A quadrilateral with exactly one pair of parallel sides.

### KS2 – Statistics

Concept	Definition
Axis (plural: axes)	A real or imaginary reference line. The y-axis (vertical) and x-axis (horizontal) on charts and graphs are used to show the measuring scale or labels for the variables.
Bar graph	A representation of data in which the frequencies are represented by the height or length of the bars.
Interval	An interval on a graph's axis lies between two values.
Line graph	A graph that uses lines to connect the points on a data chart. Used to present continuous data, such as change over time.
Plot	To mark out a point on a graph or grid.