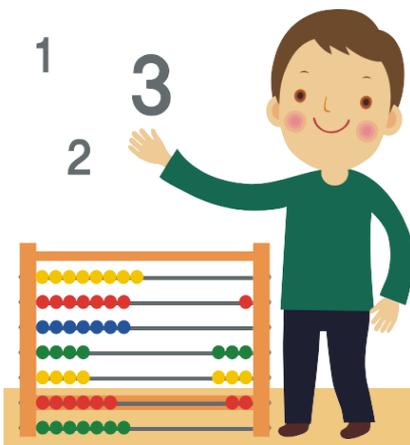
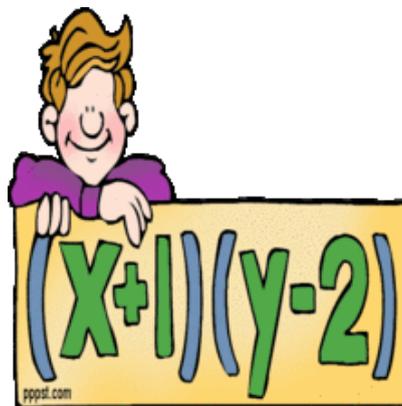




Understanding the language of mathematics:

The words listed in this vocabulary guide are those that our pupils from Year 1 to Year 6 are introduced to and expected to rehearse orally and use to articulate their understanding during their mathematics lessons.



Year 1 Words: Number and Place Value

Abacus - an instrument for performing calculations by sliding counters along rods or in grooves

Count - to say numbers in order, usually starting at 1

Count back (from) – count backwards from a particular number

Count on (from) – begin counting from a particular number

Digit A digit is a type of symbol (a numeral symbol, such as "2" or "5") used in combinations (such as "25") to represent numbers (such as the number 25)

Enough - as much as is needed

Equal to - of the same measure, quantity, amount, or number as another

Estimate - to form an approximate judgment or opinion regarding the worth, amount, size, weight of something

Even - a number or quantity that can be exactly divided by two with nothing left over, e.g. 2, 6, 30, or 518.

Every other (number) – miss one out each time, so every other odd number would be: 1, 5, 9 etc.

Few - amounting to or consisting of a small number

First - occurring before any others in a series **Greater**

- more, larger, bigger

Greatest - most, biggest, largest

Just over/just under - by only a small degree or margin

Last but one - the one before the final one

Last- occurring after all the others

Least - fewest, smallest

Less - smaller amount or proportion of something

Many- a large indefinite number

More - greater quantity, amount, measure, degree, or number

Nearly/roughly- closely, in time, proximity, or relationship about the same as

Next – following immediately after the present or previous one

None - not any of something, not any part of something, or not a single one of something

Number - a figure, symbol, or word used in calculating quantities of individual things

Number cards - Number cards are a useful resource for counting, matching, and all sorts of maths games

Number Facts-The basic addition and subtraction facts are all the combinations of 1-digit numbers (2+2, 6+9, 8+4, etc.) and the corresponding subtraction exercises (18-9, 7-4, etc.) that will eventually be memorized. Similarly, times tables are the multiplication and division facts that we memorise to help us become quicker at calculating answers.

Number line/number track - Number tracks with no zero are an essential starting point for children in developing their understanding of the **value of number**, as they aid the understanding of 1-1 correspondence between numbers and squares.

Number square - The 100 square can be used to find lots of number patterns. The children can investigate how even and odd numbers are situated in the square, how multiples of different numbers are arranged, and where square and triangular numbers are found. They are also a useful resource for many other types of maths activities

Odd- a number that, when divided by 2, leaves a remainder of 1 e.g. 1, 3, 5, 7, 9, or 11.

Order - arrange items in a particular way, e.g. smallest to largest

Second - coming after the first in a series

Size - the dimensions, extent, amount, or degree of something, in terms of how large or small it is

Teens' number – the numbers 11-19 are known as the teen numbers. Their names do not follow the common rule and they are the sight words/ numbers of mathematics

Third - item number three in a series

Too few – not enough

Too many – more than is needed

Units, ones - used to show the "ones" place value (units, tens, hundreds, etc.) Example: 327 has three hundreds, two tens and 7 units.

Zero- the numerical symbol 0, representing the absence of any quantity or magnitude

Addition and Subtraction

+, add, more, plus - to calculate the total of two or more numbers or amounts

Difference between - the amount by which one quantity is greater or smaller than another
half, halve

Double - being twice as much in size, number, or value

= equals sign - is a mathematical symbol used to indicate equality i.e. that one thing is the same as another

Make, sum, total, altogether - several amounts added or considered together

Near double - The near doubles build on the doubles facts, e.g. when faced with a fact like $6 + 7$, think double 6, plus one more.

- Subtract, take (away), minus - to perform the arithmetical calculation of deducting one number or quantity from another

Multiplication and Division

Share out- to divide and assign in portions

Left, left over – the amount remaining once things have been divided out equally

Fractions

Four quarters - all of the four equal or equivalent parts into which anything is or may be divided – equivalent to one whole

Fraction - A fraction is a part of a whole.

One half- one of two equal parts that together constitute a whole

One quarter - one of the four equal or equivalent parts into which anything is or may be divided

One whole - the full quantity, amount, extent, number

Part, equal parts -Equal parts are portions that are the same size

Two halves – two of two equal parts, equal to one whole

Measurement (time, money, length/height, capacity, weight/mass)

After -behind in order or place, later in time than

Afternoon-the period of the day between noon or lunchtime and evening**All,**

every – each member of a group or set, without exception

Always-throughout all past time or all future time, or for as long as anyone can remember and as long as anyone can foresee; used to indicate that something happens or is done continuously, repetitively, or on every occasion

Autumn - the season between summer and winter comprising in the northern hemisphere usually the months of September, October and November

Balance- a simple mechanical device for weighing objects, often consisting of a pivoted horizontal beam with a pan suspended from each end. Material to be weighed is put in one pan and weights of a fixed value are gradually added to the other until the beam returns to the horizontal.

Bedtime - the time when somebody normally goes to bed, or should go to bed

Before- previous to; earlier or sooner than

Birthday -the day in each year that is the anniversary of the day somebody was born

Buy - to pay money for something in order to obtain it

Change - the balance of money given back to a customer who has handed over a larger sum than the cost of the goods or services purchased

Cheap, costs less, cheaper – low (lower) in price or cost, or lower in price than might be expected
costs the same as

Clock –A clock is an instrument to indicate, keep, and co-ordinate time

Close –near in space or time, almost the same as a particular number or quantity

Coin - a usually circular flat piece of metal stamped with its value as money

Cost - the amount of money required to be paid for something

Day- a period of 24 hours, usually beginning and ending at midnight

Days of the week: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

Dear, costs more - at a high (higher) cost

Deep – extending far down from the top or surface

Depth – the distance or measurement from the top of something to its bottom, from front to back, or from the outside in

Dinnertime-the time of the day when dinner is usually eaten

Early-before the expected or arranged time

Empty - having nothing inside; holding or containing nothing

Container - anything that contains or can contain something, such as a carton, box, crate, or can

Evening - the part of the day between sunset or the last main meal of the day and bedtime

Far –at, to, or from a great distance

Fast-acting, functioning, or moving quickly **Full**

–holding as much or as many as is possible

Half past - Thirty minutes past any hour

Hands -pointers on a clock, watch, dial, or gauge

Heavier – weighing more than something else

Heavy -weighing a relatively large amount and thus difficult to lift, carry, or move

Height – this is the measurement of vertical distance, but has two meanings in common use. It can either indicate how "tall" something is, or how "high up" it is.

High –extending a long way from bottom to top, especially when viewed from the bottom

Higher/ highest – reaching further/ furthest upwards

Holiday - day taken off or set aside for leisure and enjoyment as a break from work or usual activity

Hour-one of the 24 equal parts of a day, equivalent to 60 minutes or 3,600 seconds

Just over/ just under – more or less by only a small degree or margin

Last -being or occurring after all the others

Late -occurring, coming, or being after the usual or proper time **Length** -

the longest extent of anything as measured from end to end **Lighter**–

weighing less than something else

Light-weighing comparatively little

Long –extending a relatively great length or height or lasting for an extended period of time

Longer/ longest -the more or most distant or lengthy of two or more things

Low – occurring not far above the ground, floor, or base

Measure - a particular system used to determine the dimensions, area, volume, or weight of something

Metre – basic metric unit of length =100cm (equivalent to approximately /1.094 yard or /39.37 in).

Metre stick - a measuring stick one metre long that is marked off in centimetres and usually millimetres

Midnight -12 o'clock at night or the period around the middle of the night

Money - a medium of exchange in the form of coins or paper banknotes, used as the measure of the value of goods and services

Month-a period of time equivalent to about four weeks or 30 days

Morning-the part of the day between midnight and midday **Narrow** – of little breadth or width; not broad or wide

Near-at a point that is not far away in state, resemblance, or number

Nearly, roughly – almost, close to, about the same as

Never – not ever; at no time

New-recently made, created, or invented

Next- following immediately after the present or previous one

Night-the period of darkness occurring each day in most parts of the world, or the entire period between sunset and sunrise

Now-at the present time

O'clock- Of or according to the clock

Often – many times; frequently

Old-having existed or been used for a long time, especially if showing wear or age

Pay - give somebody money for work done or for goods or services provided

Penny (pence) - subunit of currency in the United Kingdom – there are one hundred pence in a pound

Playtime - a time set aside for play, especially as a break for children at school

Pound - the main unit of currency in the United Kingdom

Price - is the quantity of payment or compensation given by one party to another in return for goods or services.

Quick-done or taking place in a very short period of time

Quickly –moving or doing something fast

Ruler - A straight edged strip of wood, plastic or metal, for drawing straight lines and measuring lengths

Scales – are devices to measure weight or calculate mass. Spring balances or spring scales measure weight (force) by balancing the force due to gravity against the force on a spring, whereas a balance or pair of scales using a balance beam compares masses by balancing the weight due to the mass of an object against the weight of a known mass or masses

Seasons - a traditional division of the year based on distinctive weather conditions

Sell - to transfer (goods) to or render (services) for another in exchange for money

Shallow -of little depth; not deep

Short – having little length (not long), having little height (not tall) extending or reaching only a little way

Shorter/ shortest- less or least lengthy or distant of two or more things

Size - the dimensions, extent, amount, or degree of something, in terms of how large or small it is

Slow- moving or proceeding with little or less than usual speed

Slowly- in a slow manner: not quickly

Sometimes-from time to time, not continually or every time

Soon-within a short period after this or that time

Spend (spent) - pay out money in exchange for goods or services

Spring -one of the four conventional temperate seasons, following winter and preceding summer – in the northern hemisphere the months of March, April and May

Summer - the hottest of the four temperate seasons, falling between spring and autumn – the months of June, July and August

Tall – reaching or having grown to a considerable or above average height

Thick-having relatively great extent from one surface or side to the opposite; not thin

Thin –having little extent from one surface to its opposite; not thick
Time- the minute, hour, or similar measurement as indicated by a clock
Today-on or during this day

Tomorrow-the day following today

Too many/ too few - a larger number of people or things than is necessary or desirable.

Too much/ too little – more or less of something than is necessary or desirable

Total - the sum of several amounts added or considered together

Usually -most of the time

Watch-a small clock worn on the wrist or carried in a pocket

Week- a period of seven days beginning from a specific day, usually Sunday

Weekend- the end of the week, from Friday evening until Sunday evening

Weight -the amount or quantity of heaviness or mass; amount a thing weighs

Weigh-To determine the weight of, as with a scale

Wide - having a large measure across: broad

Width – the measurement of the extent of something from side to side

Winter - the season between autumn and spring comprising in the northern hemisphere usually the months of December January, and February

Year- a period of 365 days (or 366 in a leap year), measured from 1 January to 31 December

Yesterday-the day before this one

Geometry –Shape, Position and Direction

Above - in a higher position, or on top of

Across - from one side to the other **After** -

subsequent to in time or order

Along - following a course or line parallel with or beside something; moving over or all or part of the length of something (e.g. walking along the path)

Apart - separately in place, time, motion, etc.

Around - on all sides; in all directions from a centre or point of reference **Away**

from - separated or far from somebody or something

Back - the part that is at the rear of something or is furthest from the front

Backwards - in the reverse order or direction to the usual

Before - previous to; earlier or sooner than

Behind -in or towards a position farther back or at the rear of something **Below**

-in or to a lower place; beneath

Bend - to take on a curved or angled shape, or cause something to do this

Beside- by or at the side of; near: compared with

Between – an intermediate point in the middle of two things, numbers, etc. 2 comes between 1 and 3.

Bottom-the lowest or deepest part of anything

Centre - the middle point; the point within a circle or sphere equally distant from all points of the circumference or surface

Circle - a two-dimensional geometric figure formed of a curved line surrounding a centre point, every point of the line being an equal distance from the centre point

Close - near in space or time

Cone - A cone is a three- dimensional geometric shape that tapers smoothly from a flat base (frequently, though not necessarily, circular) to a point called the apex or vertex.

Corner - the place at which two converging lines or surfaces meet

Cube - a three-dimensional geometric figure formed of six equal square plane faces, each set at right angles to the four sides adjacent to it

Cuboid - a three-dimensional geometric figure formed of six rectangular plane faces, each set at right angles to the four sides adjacent to it

Curved – a curve or curved line is not straight

Cylinder - A cylinder is a closed solid that has two parallel (usually circular) bases connected by a curved surface.

Direction - the path along which something moves, lies, or points

Down - towards or at a lower level

Edge-the line where two surfaces of something solid meet

Face-a plane surface or side of a three-dimensional object

Far
- to, or from a great distance

Flat –level and horizontal, without any slope

Forwards - to or towards what is ahead in space or time

From - used to indicate the distance between two things or places

Front-the area, section, or position just ahead of, close to, or at the forward part of something

Half turn – a turn of 180 degrees

Hollow- having a space or cavity inside; not solid

In front- ahead of, outside the entrance of, in the presence of
In- within or inside something

Inside – the interior part of something, or the part that is enclosed or surrounded by something

Journey - travelling from one place to another

Left - located on, or being the side of the body to the north when the subject is facing east

Middle - equally distant from the outer limits; central
Movement - the way in which somebody or something moves

Near- a point that is not far away in state, resemblance, or number
Next to- adjacent to

On-a position above and in contact with the surface of something else

Opposite -positioned so as to face somebody or something from the other side of an intervening space

Outside- located on or beyond the outer surface or edge of something

Over- directly above something

Pattern –a regular or repetitive form, order, or arrangement

Pointed –ending in a point or sharp angle

Position - position refers to the spatial location (rather than orientation) of an entity

Pyramid - a solid shape or structure that has triangular sides that slope to meet in a point and a base that is often, but not necessarily, a square.

Rectangle - two-dimensional geometric figure formed of four sides in which each angle is a right angle, adjacent sides may be of different lengths

Right - on the side of the body that is east when you face north, or on the corresponding side of an object

Roll - to move with repeated turning or rotating motions, or cause something to move in this way

Round –having a flat, circular surface

Shape- a shape is the form of an object or its external boundary, outline, or external surface

Side 1.–a line segment that forms part of the perimeter of a plane geometric figure; a surface of a solid geometric figure

Side 2- the left or right of an object as opposed to the top, bottom, front, or back

Sideways - to or towards one side

Size -the dimensions, extent, amount, or degree of something, in terms of how large or small it is

Slide - to move, or make something move, in an uninterrupted glide across a smooth surface; to move a shape without rotating or flipping it – also known as 'translation'

Solid –having no open interior spaces, having the three dimensions of length, breadth, and depth, or relating to geometric figures that have three dimensions

Sphere - a three-dimensional closed surface consisting of all points that are a given distance from a centre (the shape of a ball)

Square - a square is a regular quadrilateral, which means that it has four equal sides and four equal angles (90-degree angles, or right angles)

Star - a shape representing or based on that of a star as seen in the night sky, usually having four or five triangular points radiating from a centre.

Straight - without a bend, angle, or curve

Stretch - to lengthen, widen, or extend something

Symmetrical - something that is symmetrical has corresponding similar parts: in other words, one side is the same as the other.

Through - passing from one side or end of something to the other

To - indicates the position of somebody or something, e.g. to the right of the door you will see a noticeboard.

Top - the highest part or point of something

Towards - somebody or something is moving or facing in the direction of somebody or something else

Triangle - A triangle is a polygon with three edges and three vertices.

Turn - to move to face in a different direction or towards a particular location, or move something so that it does this

Under - beneath or below something

Underneath - directly below

Up - in, at, or to a higher level or position

Whole turn – a turn of 360 degrees

General Vocabulary

Answer - the information requested by a spoken or written question

Arrange - to put people or things in a position or order

Carry on/continue - to keep up an activity or state already begun

Check - to confirm or establish that something is true or accurate

Compare - to find the similarities or differences between two or more people or things

Complete - to make something whole by including every necessary part or everything that is wanted; to finish something or bring it to an end

Copy - to make another example that is exactly the same as something else

Counters- a small object, often a flat disc, used to mark a player's position or to keep score in board games, but also used as a visual aid for counting in mathematics activities

Cubes/blocks – colourful (often interlocking) cubes that help children learn early mathematics concepts.

Describe - to give an account of something by giving details of its characteristics

Explain - to give an account of something with enough clarity and detail to be understood by somebody else

Die (plural **dice**) - a small cube marked on each face with from one to six spots

Dominoes - a game played with rectangular "domino" tiles. The domino gaming pieces make up a domino set, sometimes called a deck or pack.

Fill in - to supply missing or desired information

Group - a number of things considered together or regarded as belonging together

Guess - form an opinion about something without enough evidence to make a definite judgment

Imagine - form an image or idea of somebody or something in the mind

List - arrange related numbers, names or words in order, one after the other

Number sentence – a number sentence is typically an equation or calculation expressed using numbers and common symbols.

Operation - a mathematical process in which entities are derived from others through the application of rules, e.g. subtraction, multiplication, addition or division

Pair - two identical, similar, or corresponding things

Pattern- a regular or repetitive form, order, or arrangement

Peg board - board having holes into which pegs are placed in specific patterns

Puzzle - a game or toy designed to test skill or intelligence

Rearrange - to change the order or position of something

Record - put something into a form in which it can be kept, to write something down

Remember - to retain an idea in the memory without forgetting it; to recall something to mind

Repeat - to do, produce, or experience something again or several times

Right-correct, accurate, or consistent with the facts or general belief

Rods - Cuisenaire rods come in 10 color related sizes from 1cm to 10cm lengths and are used for teaching number bonds and place value

Score - a particular number of points awarded to somebody in a match, game, or other competition

Separate - to split something into component parts

Set - a collection of people or things considered together and usually having something in common

Shade - to darken part of a drawing or picture using pencil, ink, or some other dark medium

Sign -a conventional or arbitrary mark, figure, or symbol used as an abbreviation for the word or words it represents.

Sort-to place people or things in categories according to shared attributes

Split - to divide a whole into parts

Start from /start with/start at - to begin doing something at/from a certain point/number

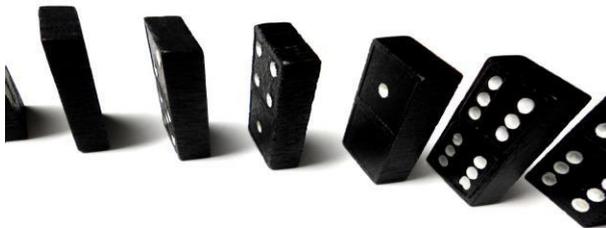
Table - systematic arrangement of data usually in rows and columns

Think - to use the mind to consider ideas and make judgments

Trace - to copy writing, a design, or drawing by putting translucent paper on top of it and drawing the visible outlines on this paper

Vote - a formal indication of somebody's choice or opinion

Wrong - not correct or accurate



Year 2 Words:

Number and Place Value

Hundreds - the digit that is three places to the left of the decimal point represents the hundreds

One thousand - 1000 or one thousand is the natural number following 999 and preceding 1001.

Place value - In our decimal number system, the value of a digit depends on its place, or position, in the number. Each place has a value of 10 times the place to its right.

Tens boundary - when numbers jump over a multiple of 10 it is known as crossing the tens boundary (e.g. $2 + 9 = 11$ this calculation jumps over 10)

Two hundred- 200 (two hundred) is the natural number following 199 and preceding 201

Two-digit numbers – the numbers that are higher than 9 and lower than 100- those that are made up of two digits

Algebra

Stands for, represents - a letter, figure, or other character or mark used to designate something e.g. the algebraic symbol x

Fractions

Four quarters - all of the four equal or equivalent parts into which anything is or may be divided – equivalent to one whole

Fraction - A fraction is a part of a whole.

One half- one of two equal parts that together constitute a whole

One quarter - one of the four equal or equivalent parts into which anything is or may be divided

One whole - the full quantity, amount, extent, number

Part, equal parts -Equal parts are portions that are the same size

Two halves – two of two equal parts, equal to one whole

Addition and Subtraction

+, add, addition, more, plus - Addition is an operation in which one number is added to another number. For example $1 + 2 = 3$ (one plus two equals three).

Exchange – a term used in subtraction by "Regrouping" (Also called borrowing) e.g. one ten may be exchanged for ten units

Multiplication and Division

÷, Divide, divided by, divided into - how many times one number contains another

Array – an arrangement of numbers or objects in rows and columns (used in the teaching of multiplication and division)

Column - a vertical arrangement of numbers, quantities, or terms

Share equally - to allocate equal parts of something to different people or groups – another term for division

Group in pairs, threes... tens/ find equal groups of – terms used in division for finding how many times a number can be divided exactly by another number

Lots of/ Groups of – used in multiplication – e.g. 2 lots of 3 = 6

Multiple of - Multiples are what we get after multiplying a number by an integer (not a fraction); can be divided exactly by a particular smaller number

Repeated addition - multiplication can be taught as a form of repeated addition – e.g. $3 \times 5 = 5 + 5 + 5$

x, Times, multiply, multiplied by - to find the product of two or more numbers by multiplication

Measurement

Capacity - The measure of how much liquid or other pourable substance a container will hold

Centimetre (cm) - is a unit of length in the metric system, equal to one hundredth of a metre

Contains - to hold or include within its volume or area

Gram (g) - metric system unit of mass - 1000g are equal to 1kg.

Half-kilogram - half a kilogram equals 500 grams.

Half-litre – 500 millilitres

Kilogram (kg) - basic unit of mass, being 1000 grams, or one cubic decimeter of water - equivalent to 2.205 pounds

Litre (l) - unit of volume used for liquids, equal to 1000 cubic centimeters, or 1 cubic decimeter, or to 1.0567 quarts

Measuring scale - a system that is used to determine the dimensions, area, volume, or weight of something

Millilitre (ml) - A unit of volume equal to one thousandth of a litre or 1 cubic centimetre

Sell/sold - to transfer (goods) to or render (services) for another in exchange for money

Geometry

Anti-clockwise - in the opposite direction to the rotation of the hands of a clock

Circular - in the shape of a circle; round

Clockwise - A clockwise motion is one that proceeds in the same direction as a clock's hands

Hexagon - a polygon with six edges and six vertices

Higher - greater in quantity, as number, degree, or force or further above the ground

Journey - to travel to a place or over a particular distance

Line of symmetry – this is a line that divides a figure into two congruent parts, each of which is the mirror image of the other.

Lower - less than one or more numbers or variables, being physically below one or more other things, reduced in amount or value: a lower price.

Mirror line - a line of reflection which acts like a mirror.

Octagon - a polygon that has eight sides.

Pentagon – a pentagon is any five-sided polygon

Quarter-turn – a turn of 90 degrees

Rectangular - with four sides, usually with adjacent sides of different length, and four right angles

Reflection - a symmetrical transformation in which a figure is reversed along an axis so that the new figure produced is a mirror image of the original one

Right angle - A right angle is an angle equal to half the angle from one end of a line segment to the other – an angle of 90 degrees

Route - a road, course, or way for travel from one place to another

Straight line – a line travelling in a constant direction; a line of zero curvature

Surface - a flat or curved continuous area definable in two dimensions

3 times as (big, long, wide) –if a rectangle is three times as long as it is wide, you would multiply the width by 3 to find the length

Triangular - relating to or shaped like a triangle (i.e. with three sides) or having a triangle for a base - a triangular pyramid.

Statistics

Block graph - a type of graph that shows different amounts or numbers as rectangular blocks of different sizes

Graph - a diagram used to indicate relationships between two or more variable quantities. The quantities are usually measured along two axes set at right angles to each other. A graph may be in different forms, e.g. of a line joining points plotted between coordinates, or a series of parallel bars or boxes.

Hundred square and Number grid - popular tools used to explore number patterns, adding, difference and multiplication

Label - to describe something using a particular word or phrase –e.g. the axes on a graph

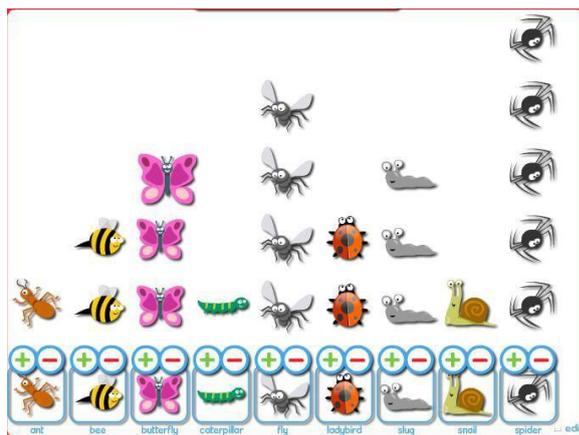
Least popular, least common - indicated by the shortest column on a block graph

Most popular, most common – indicated by the highest column on a block graph

Pictogram - a chart or diagram that uses symbols or pictures to represent values

Tally- a set of four short vertical lines crossed by a diagonal fifth line used for numbering things in fives

Title - a descriptive heading or caption, e.g. what a graph shows



Pictogram

General Vocabulary

Buy/bought - to pay money for something in order to obtain it

Calculate - to work out or estimate a figure using mathematics
solve

Calculation - the process of working out the answer to a mathematical problem, or a step in this process

Continue - extend something, beyond a particular point or beyond its original length –e.g. a sequence of numbers

Correct – make or put right

Decide - make a choice or come to a conclusion about something

Describe the pattern - identify the number patterns corresponding to number sequences

Describe the rule - a sequence usually has a rule, which is a way to find the value of each term.

Discuss - to investigate by reasoning or argument

Explain your method – show how you worked out the answer
give an example of...

Exact, exactly - precise and not allowing for any variation

Example: the sequence {3, 5, 7, 9, -} starts at 3 and jumps 2 every time

Find, find all, find different - discover or ascertain through observation, experience, or study e.g. find the product of two numbers; find all the numbers that will divide exactly into 10

Geo-strips – flexible plastic strips used to build geometric shapes, measure angles, and demonstrate symmetry

Investigate - to observe or study by close examination and systematic inquiry

Mental calculation - Mental calculation comprises arithmetical calculations using only the human brain, with no help from calculators, computers, or pen and paper.

Name - to decide upon or specify something e.g. name all the even numbers in this sequence

Number bonds - Number bonds help children learn number relationships and fact families in addition, subtraction, multiplication, and division

Predict - A prediction is a reasonable guess as to what will happen so a prediction in maths is when you make an educated guess on the answer to a problem

Recite - to repeat from memory

Represent - stand for, or denote, e.g. a picture or symbol used to convey values on a graph

Rule - a mathematical procedure for performing an operation or solving a problem

Sequence - an ordered set of elements that can be put into a one-to-one correspondence with the set of positive integers

Write in figures – write numbers using digits rather than words, e.g. 10 instead of ten



Year 3 Words:

Number and Place Value

Hundreds - the number that is three places to the left of the decimal point

Least value/ Greatest value- if there are 3 numbers, 5, 9, and 26, the number with the least value is the number 5 because the numbers 9 and 26 are larger numbers and the number with the greatest value is 26.

Relationship - a property of association, e.g. 'greater than' or 'less than', shared by ordered pairs of terms or objects

Round (up or down) - leave it the same if the next digit is less than 5 (this is called rounding down) but increase it by 1 if the next digit is 5 or more (this is called rounding up)

Fractions

One tenth - one part in ten equal parts

One third - one of three equal parts of a divisible whole

Two thirds - two of three equal parts of a divisible whole

Multiplication and Division

Division - an operation used to calculate the number of times one number is contained in another/ one of the parts created when something is split

Equation – this is a mathematical statement that two expressions, usually divided by an equals sign, are of the same value

Multiplication - a mathematical operation, symbolized by \times that (for integers) is equivalent to adding a number to itself a particular number of times

Product - the result of the multiplication of two or more quantities

Remainder - the amount left over when a number or quantity cannot be divided exactly by another

Measurement

Amount - the total number or quantity

Less expensive – costing less money

More expensive – costing more money

Note - a piece of paper money issued by a bank that may be freely exchanged for goods or services –e.g. a twenty pound note

Pence - plural of penny; used in referring to a sum of money rather than to the coins themselves

Penny - A penny is a coin or a unit of currency used in several English-speaking countries. It is often the smallest denomination within a currency.

Pound, (£) - the main unit of currency in the United Kingdom and several other countries – 100 pence is equal to 1 pound

Value - the monetary worth of something - its market price

Worth - having monetary or material value

Statistics

Axis (axes) - one of two or more lines on which coordinates are measured. Often on a graph two axes form its left and lower margins.

Bar chart - A bar chart or bar graph is a chart that presents Grouped data with rectangular bars with lengths proportional to the values that they represent.

Carroll diagram - A Carroll diagram is a diagram used for grouping things in a yes/no fashion. Numbers or objects are grouped as having or not having a particular attribute

Chart – a chart, also called a graph, is a graphical representation of data, in which "the data is represented by symbols, such as bars in a bar chart, lines in a line chart

Diagram - a graph, chart, drawing or plan that explains something by showing how the parts relate to each other.

Frequency table – A Frequency Table is a table that lists items and uses tally marks to record and show the number of times they occur.

Grid - A grid is a framework of crisscrossed or parallel bars
Row, column

Row-horizontal linear arrangement of numbers, quantities, or terms

Venn diagram - a mathematical diagram representing sets as circles, with their relationships to each other expressed through their overlapping positions, so that all possible relationships between the sets are shown

Measurement

a.m. - The abbreviation a.m. for Latin ante meridiem, meaning “before noon,” refers to the period from midnight until noon

Approximate/Approximately - An approximation is anything that is similar but not exactly equal to something else

Arrive - to reach a destination

Calendar – a system for fixing the beginning, length, and divisions of the year and arranging days and longer divisions of time (as weeks and months) in a definite order

Centimetre (cm) – this is a unit of length equal to one hundredth of a metre.

Date – a date is a particular month, day, and year at which some event happened or will happen

Days of the week- Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

Depart - to leave, especially at the beginning of a journey

Distance apart/between - the extent or amount of space between two things

Earliest - coming before all others in time or order

Kilometre (km) - unit of length equal to 1,000 metres and the equivalent of 0.6214 mile (see metric system).

Latest - coming after all others in time or order

Metre (m) – this is the basic unit of length used around the world. It is equivalent to 100 centimetres and approximately 1.094 yards or 39.37 inches.

Mile - a unit of linear measurement on land, used in English-speaking countries, equivalent to 5,280 feet or 1,760 yards or 1.6 km

Months of the year- January, February, March, April, May, June, July, August, September, October, November, December

p.m. - indicates the time period from midday to midnight- post meridiem

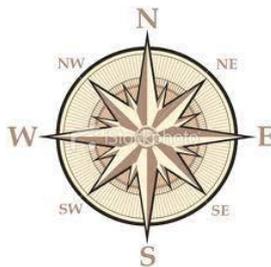
Seasons- spring, summer, autumn, winter

Timetable - A schedule listing the times at which certain events, such as arrivals and departures at a transportation station, are expected

Geometry

Ascend – to move upward/ get higher

Compass point – one of the four main points on a compass (N, S, E, or W)



Descend - to go or move downward/ get lower

Diagonal - something with slanted lines or a line that connects one corner with the corner furthest away.

Hemi-sphere - Half of a sphere, e.g. half of the Earth is a hemisphere of the Earth

Hexagonal - having six sides and six angles

Horizontal - at right angles to the vertical; parallel to level ground.

Layer - a single thickness of something that lies over or under something or between other similar thicknesses

Map - to assign an element in one set to an element in another through a mathematical correspondence

North, south, east, west, (N, S, E, W) - The four cardinal directions or cardinal points are the directions of north, east, south, and west, commonly denoted by their initials: N, E, S, W

Octagonal - having eight sides and eight angles

Pentagonal - having five sides and five angles

Prism - A solid figure whose bases or ends have the same size and shape and are parallel to one another, and each of whose sides is a parallelogram.

Quadrilateral - a quadrilateral is a polygon with four sides (or edges) and four vertices or corners.

Question - to raise doubts about something, especially about its truth, genuineness, or usefulness

Right-angled triangle - a right-angled triangle is a triangle in which one angle is a right angle (that is, a 90-degree angle)

Semi-circle - Half a circle

Vertex - in geometry, a vertex (plural vertices) is a special kind of point that describes the corners or intersections of geometric shapes.

Vertical – means in an upright position, or running lengthways up or down.

General Vocabulary

Interpret – establish or explain the meaning or significance of something

Investigate - carry out a detailed examination or enquiry

Year 4 Words:

Number and Place Value

Hundred thousand – One hundred thousand (100,000) is the natural number following 99999 and preceding 100001

Integer – Integers are positive and negative whole numbers

Million - One million (1,000,000) or one thousand thousand is the natural number following 999,999 and preceding 1,000,001

Negative number - a negative number is a real number that is less than zero.

Numeral - a symbol or group of symbols used to express a number
Positive number – A positive number is a number that is bigger than zero.

Rounding to the nearest hundred - when rounding to the nearest hundred, you need to look at the TENS DIGIT of the number. If that digit is 0, 1, 2, 3, or 4, you will round down to the previous hundred. If it is 5,6,7,8 or 9, you will round up to the next hundred

Ten thousand – 10000 (ten thousand) is the natural number following 9999 and preceding 10001.

Thousand - A numerical value equal to $1,000 = 10 \times 100 = 10^3$

Addition and Subtraction

Minus - The plus and minus signs (+ and –) are mathematical symbols used to represent the notions of positive and negative as well as the operations of addition and subtraction

Fractions

Eighth - One of eight equal parts
Fifth

- One of five equal parts
Sixth - One of six equal parts

Multiplication and Division

Divisible by - One whole number is divisible by another if, after dividing, the remainder is zero

Factor – Factors are numbers you can multiply together to get another number: Example: 2 and 3 are factors of 6, because $2 \times 3 = 6$. A number can have MANY factors!

Quotient - the result of division; the number of times one quantity is contained in another.

Statistics

Data - factual information (as measurements or statistics) used as a basis for reasoning, discussion, or calculation

Tally chart - A table used to record values for a variable in a data set, by hand, often as the values are collected. One tally mark is used for each occurrence of a value

Measurement

Area – The size of a 2-dimensional surface such as a triangle or circle. The area of a rectangle is found by multiplying the height/ length by the width

Breadth - distance from side to side: width
edge, perimeter

Century – A century (abbreviated c.) is 100 years.

Date of birth - The date and year something/ somebody was born

Day- a period of 24 hours, usually beginning and ending at midnight

Fortnight - A fortnight is a unit of time equal to 14 days (2 weeks)

Leap year- Leap years have 29 days in February, not 28. Nearly every 4 years is a Leap Year, and we add a Leap Day on February 29. A leap year has 366 days instead of 365.

Mass - weight

Measurement - a figure, extent, or amount obtained by measuring unit, standard unit
metric unit, imperial unit

Measuring cylinder – a measuring cylinder or mixing cylinder is a piece of laboratory equipment used to measure the volume of a liquid.

Millennium - A millennium (plural millennia) is a period of time equal to 1000 years

Millimetre (mm) - a unit of length equal to one thousandth of a metre

Month - A unit of time corresponding approximately to one cycle of the moon's phases - about 30 days or 4 weeks. There are 12 months in the year

Noon - is usually defined as 12 o'clock in the daytime. The term midday is also used.

Ounce - unit of weight equal to 1 / 16 pound

Pint - A unit of volume or capacity equal to 1 / 8 gallon or 16 ounces

Square centimetre (cm²) – this is the area equal to a square that is 1 centimeter on each side. Used for measuring small areas such as on drawings

Week - A week is a time unit equal to seven days.

Weight - the amount or quantity of heaviness or mass; amount a thing weighs

Year – the period of about 365 1/4 solar days required for one revolution of the earth around the sun

Geometry

2D, two-dimensional - A shape that only has two dimensions (such as width and height) and no thickness. Squares, Circles, Triangles, etc. are two dimensional objects.

3D, three-dimensional – if something is three dimensional it is an object that has height, width and depth, like any object in the real world.

Angle- the space between two diverging lines or planes

Base- a side of a plane figure (for example a triangle) or face of a solid

Compasses – a pair of compasses is a technical drawing instrument that can be used for inscribing circles or arcs. As dividers, they can also be used as tools to measure distances, in particular on maps. Compasses can be used for mathematics, drafting, navigation, and other purposes

Concave – curved inward like the inner surface of a bowl or sphere

Construct - to draw (a figure) fulfilling certain given conditions

Construct- is to draw (a figure) fulfilling certain given conditions.

Convex - having a surface that curves outwards rather than inwards
open, closed

Coordinates - Coordinates are a set of values that show an exact position. On maps and graphs it is common to have a pair of numbers to show where a point is: the first number shows the distance along and the second number shows the distance up or down.

North-east, north-west, south-east, south-west

(NE, NW, SE, SW) - The four cardinal directions are the directions of north, east, south, and west, commonly denoted by their initials: N, E, S, W. Intermediate points between the four cardinal directions form the points of the compass. The intermediate directions are northeast (NE), southeast (SE), southwest (SW), and northwest (NW).

Cylindrical - having the form or properties of a cylinder

Degree - A degree usually denoted by ° (the degree symbol), is a measurement of plane angle, representing $\frac{1}{360}$ of a full rotation

Diameter - the diameter of a circle is any straight line segment that passes through the centre of the circle and whose endpoints lie on the circle.

Equilateral triangle- this is a triangle in which all three sides are equal

Heptagon - A heptagon is a seven-sided polygon.

Irregular shape - Irregular shapes have NO lines of symmetry and all the sides are not the same.

Isosceles triangle - an isosceles triangle is a triangle that has two sides of equal length.

Line – A line is a straight one-dimensional figure having no thickness and extending infinitely in both directions.

Line symmetry – This is another name for reflection symmetry. One half is the reflection of the other half
reflect

Net - Some 3D shapes, like cubes and pyramids, can be opened out and unfolded into a flat shape. The unfolded shape is called the net of the solid.

Oblong - a rectangle with length greater than its width (i.e. not a square)

Origin- This is the point of intersection of all axes in a coordinate system. In a plane it has the coordinates (0, 0), while in a three-dimensional space it has the coordinates (0, 0, 0).

Plot - to mark something on a chart

Polygon - A polygon can be defined as a geometric object consisting of a number of points (called vertices) and an equal number of line segments (called sides)

Polyhedron - In geometry, a polyhedron is simply a three-dimensional solid which consists of a collection of polygons, usually joined at their edges

Radius - The radius of a circle is the length of the line from the centre to any point on its edge.

Regular shape – this is a shape where all the sides are equal and all the angles are equal.

Rotate - Rotate means to circle around a centre point.

Ruler- is a straight edged strip of plastic, wood or metal, for drawing straight lines and measuring lengths.

Set square - a flat piece of metal or plastic in the shape of a triangle with one angle of 90° , used for drawing angles

Sketch - a rapidly executed freehand drawing that is not usually intended as a finished work.

Spherical - having the form of a sphere or of one of its segments

Square-based pyramid- A square based pyramid has 5 faces/sides, 8 edges and 5 vertices/corners

Tetrahedron – tetrahedron (plural: tetrahedra or tetrahedrons) is a polyhedron composed of four triangular faces, three of which meet at each corner or vertex.

General Vocabulary

Classify - to arrange things into different classes by such unifying traits as size, colour, or shape

Consecutive - following one after another without others coming in between

sort- to group on the basis of any characteristic in common **Decrease** -

to grow progressively less (as in size, amount, number)

Increase - to make (something) larger or greater in size, amount, number

Inverse - Inverse means the opposite in effect or the reverse of something. The Inverse of Adding is Subtracting. Adding moves us one way; subtracting moves us the opposite way.

Next- immediately following in time, order, importance

Property - a quality or trait belonging and especially peculiar to an individual or thing

Questionnaire – A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information.

Survey – to ask (many people) a question or a series of questions in order to gather information about what most people do or think about something

Year 5 Words:

Number and Place Value

Ascending/descending order - Numbers are said to be in ascending order when they are arranged from the smallest to the largest number. E.g. 5, 9, 13, 17 and 21 are arranged in ascending order.

\geq Greater than or equal to - The notation $a \geq b$ means that a is **greater than or equal to b** (or, equivalently, **not less than b** , or **at least b**)

\approx Is approximately equal to - usually to indicate approximation between numbers, like $\pi \approx 3.14$

\leq Less than or equal to - The notation $a \leq b$ means that a is **less than or equal to b** (or, equivalently, **not greater than b** , or **at most b**)

Round to the nearest thousand - Look at the number in the hundred's place and...

For 0, 1, 2, 3 or 4 we round down

Measurement

Currency - a system of money, or the notes and coins themselves, used in a country

Discount - a reduction in the usual price of something

For 5,6,7,8 or 9 we round up

Gallon - a unit of capacity in the imperial system equal to $\frac{1}{8}$ imperial pints (approximately 4.55 litres)

Fractions

Cancelling (fractions) - to remove a common factor from the numerator and denominator of a fraction or the common terms from the two sides of an equation:

Denominator - the number below the line in a simple fraction, which indicates the number of parts making up the whole

- 1) Divide the numerator and denominator you have chosen by the common factor. In the example, you will have $\frac{3}{2}$ times $\frac{1}{1}$. On your paper you will cross out the number you have and put the new number that you get when you divide by the common factor.

Equivalent fractions –Equivalent fractions are fractions that have the same value or represent the same part of an object. If a pie is cut into two pieces, each piece is also one-half of the pie. If a pie is cut into 4 pieces, then two pieces represent the same amount of pie that $\frac{1}{2}$ did. We say that $\frac{1}{2}$ is equivalent to $\frac{2}{4}$.

Hundredth - a hundredth is a single part of something that has been divided equally into a hundred parts.

Improper fraction – An improper fraction is a fraction in which the numerator is larger than or equal to the denominator.

- 2) Look at the numerators and denominators. Decide if there are any common factors, or numbers that you can evenly divide into both the numerator and denominator. For instance, in $\frac{3}{4}$ times $\frac{2}{1}$, the 2 and the 4 have a common factor of 2.

Mixed- number – A mixed number is a number made up of a whole number and a fraction. It means that you have 1 (or more) wholes, and a part (the fraction).

- 3) Multiply numerators together and multiply denominators together to get your answer. In this problem the answer is $\frac{3}{2}$.

Ninth – One of nine equal parts

Numerator - the part of a common fraction appearing above the line, representing the number of parts of the whole that are being considered

Proper fraction - A proper fraction is a fraction where the numerator (the top number) is less than the denominator (the bottom number).

- 4) Reduce your answer or make it a mixed number if needed. In the example, the answer would be $1 \frac{1}{2}$. Proper canceling will make it so that you do not need to reduce your answer. You may need to make it into a mixed number, however.

Twelfth – One of twelve equal parts

Multiplication and Division

Divisible (by) - Capable of being divided, especially with no remainder: 15 is divisible by 3 and 5.

Divisibility Rules – The Divisibility Rules let you test if one number is divisible by another, without having to do too much calculation!

Factor - Factors are numbers you can multiply together to get another number: Example: 2 and 3 are factors of 6, because $2 \times 3 = 6$.

Square number - The number we get after multiplying an integer (not a fraction) by itself. Example: $4 \times 4 = 16$, so 16 is a square number

Ratio- Ratios A ratio compares values. A ratio says how much of one thing there is compared to another thing. There are 3 blue squares to 1 yellow square

Percentage -In mathematics, a percentage is a number or ratio expressed as a fraction of 100. It is often denoted using the percent sign, %

Statistics

Database - a usually large collection of data organized especially for rapid search and retrieval

Discount - a reduction in the usual price of something
currency - a system of money, or the notes and coins themselves, used in a country

Line graph -A line chart or line graph is a type of chart which displays information as a series of data points called 'markers' connected by straight line segments

Mode - The mode is the value that appears most often in a set of data

Range - In arithmetic, the range of a set of data is the difference between the largest and smallest values

Measurement

12-hour clock - The **12-hour clock** is a time convention in which the 24 hours of the day are divided into two periods: **a.m.** (from the [Latin](#) *ante meridiem*, meaning "before midday") and **p.m. (*post meridiem***, "after midday"). Each period consists of 12 hours numbered: 12 (acting as zero) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11. The 24 hour/day cycle starts at 12 midnight (often indicated as 12 a.m.), runs through 12 noon (often indicated as 12 p.m.), and continues to the midnight at the end of the day.

24-hour clock - The 24-hour clock is a time keeping convention where the day runs from midnight to midnight and is split into 24 hours, from hour 0 to hour 23.

Gallon - a unit of capacity in the imperial system equal to eight imperial pints (approximately 4.55 litres)

Square metre (m²) – This is the area equal to a square that is 1 metre on each side. Used for measuring areas of rooms, houses, blocks of land, etc.

Square millimetre (mm²) - a unit of area measurement equal to a square measuring one millimetre on each side.

Geometry

Acute – an acute angle is a small angle which is less than 90°.

Axis of symmetry – this is a line through a shape so that each side is a mirror image. When the shape is folded in half along the axis of symmetry, then the two halves match up.

Bisect - to cut or divide into two equal parts: to bisect an angle

Congruent - with identical geometric shapes

Obtuse - an angle of between 90 and 180 degrees

Octahedron - is a polyhedron that has 8 (octa) faces, (like an octopus has 8 tentacles)

Parallel - In geometry, parallel lines are lines in a plane which do not meet; that is, two lines in a plane that do not intersect or touch at any point are said to be parallel

Perpendicular - Perpendicular means 'at right angles'. A line is perpendicular to another if they meet at 90 degrees.

Protractor -an instrument shaped like a semicircle marked with the degrees of a circle, used to measure or mark out angles

Quadrant - A sector equal to one quarter of a circle, or half a semicircle

Rotation - A rotation is a circular movement of an object around a center (or point) of rotation

Reflective symmetry - Something has reflective symmetry if it looks the same reflected either side of a line.

Scalene triangle – This is a triangle with all sides of different lengths. No sides are equal and no angles are equal

X-axis - The axis on a graph that is usually drawn left to right

Y-axis - The axis on a graph that is usually drawn from bottom to top

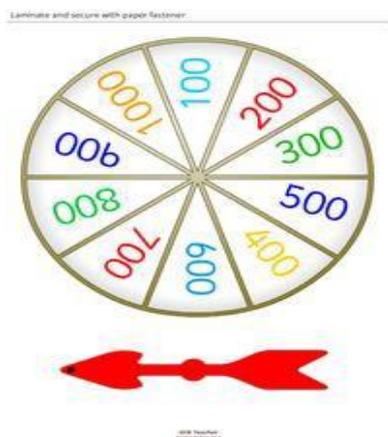
General Vocabulary

Calculator -a device used to carry out arithmetical operations, especially a small hand-held electronic device

Formula - a formula is a concise way of expressing information symbolically as in a mathematical or chemical formula

Reasoning - the use of logical thinking in order to find results or draw conclusions

Spinner - Spinners provide a quick way to select one value from a set



Year 6 Words:
Multiplication and Division

Factorise - **factorisation** or **factoring** is the decomposition of an object into a product of other objects, or **factors**, which when multiplied together give the original. For example, the number 15 factors into primes as 3×5

Prime- A prime number (or a prime) is a natural number greater than 1 that has no positive divisors other than 1 and itself.

Prime factor - Some numbers can be evenly divided only by 1 and themselves. These are prime numbers. Factors that are prime numbers are called prime factors.

Fractions

Thousandth- thousandths have three digits after the decimal point. The decimal 0.749 is pronounced "seven hundred and forty-nine thousandths"

Recurring - to occur as an infinitely repeated digit (or series of digits) at the end of a decimal fraction

Statistics

Average- A calculated "central" value of a set of numbers.

Median - the middle number in a given sequence of numbers, taken as the average of the two middle numbers when the sequence has an even number of numbers

Biased- A statistical sampling or testing error caused by systematically favoring some outcomes over others.

Distribution - the spread of statistics within known or possible limits, especially in relation to the norm or to expectations

Equally likely - If there are two possible outcomes, the probability would be 50% or $1/2$ (An **Even Chance**, **Equal Chance**). "Equally likely events" refers to the chances of each possible outcome among many being equal.

Fifty-fifty chance - if there is a fifty-fifty chance of something happening, it is equally likely to happen or not to happen

Interrogate data - to search a computer or device for specific information, e.g. a printer for the status of a print job or a database for specific data

Mean - The mean is the average of the numbers. It is easy to calculate: add up all the numbers, then divide by how many numbers there are.

Loss - the amount of money by which a company's expenses exceed income.

Profit - the excess of income over expenditure, especially in business

Random - Randomness means lack of pattern or predictability. A random sequence of events, symbols or steps has no order and does not follow an intelligible pattern.

Statistics - The mathematics of the collection, organization, and interpretation of numerical data

Measurement

British Summer Time - operates from the last Sunday in March until the last Sunday in October. The UK moves its clocks forward from Greenwich Mean Time by one hour (GMT+1).

Centilitre (cl) - a unit of volume equal to one hundredth of a litre. **Circumference**

- The circumference of a circle is the distance around it

Foot - A foot (plural feet) is a unit of length in the imperial and US customary systems of measurement. It is equivalent to 0.3048 metres. In both systems, the foot comprises 12 inches and three feet compose a yard.

Greenwich Mean Time - Greenwich Mean Time (GMT) refers to the mean solar time at the Royal Observatory in Greenwich, London, which became adopted as a global time standard

Inch - A unit of length in the US Customary and British Imperial systems, equal to 1 / 12 of a foot (2.54 centimeters).

International Date Line - The International Date Line sits on the 180° line of longitude in the middle of the Pacific Ocean, and is the imaginary line that separates two consecutive calendar days.

Ounce - unit of weight equal to 1 / 16 pound

Pound - unit now in general use among English-speaking peoples equal to 16 ounces or 7000 grains or 0.4536 kilogram

Tonne - The tonne or metric ton is a unit of mass equal to 1000 kilograms

Geometry

Arc - a section of a circle, ellipse, or other curved figure

Circumference – the distance around the edge of an object or a place that is roughly circular

Concentric – describes circles and spheres of different sizes with the same middle point

Dodecahedron - a three dimensional shape that has 12 faces

Intersection- a point or set of points common to two or more intersecting geometric figures; a set that consists of all of the elements common to two or more other sets, thus being the largest set contained in all of the others

Kite - a quadrilateral whose four sides can be grouped into two pairs of equal-length sides that are adjacent to each other.

Parallelogram - a quadrilateral with opposite sides parallel.

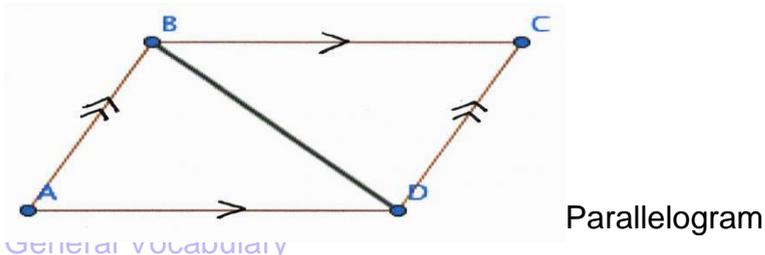
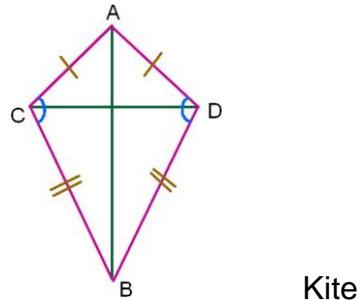
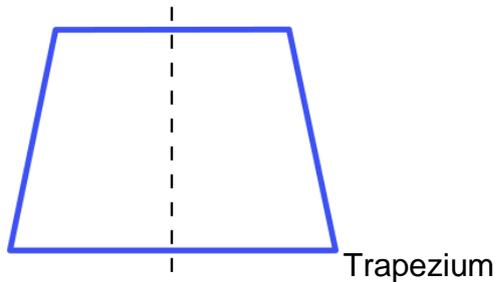
Plane - a two-dimensional surface in which a straight line between any two points will lie wholly on that surface

Reflex - describes an angle of between 180° and 360°

Rhombus - A quadrilateral with both pairs of opposite sides parallel and all sides the same length, i.e., an equilateral parallelogram.

Tangram - a puzzle of Chinese origin that involves putting together seven pieces, usually a square, a parallelogram, and five triangles, to form different shape

Trapezium- a quadrilateral with one pair of parallel sides



Operation - a mathematical process in which entities are derived from others through the application of rules, e.g. subtraction, multiplication, or division.

Memory key (calculator) - Pressing this button adds the number displayed to the contents of the memory

Identical - exactly the same as or equal to something else, or alike in every respect

Prove - to verify that a mathematical result is correct

Strategy – a problem solving plan - learning how to solve problems in mathematics is about knowing what to look for.