Hampshire County Council

Improvement and Advisory Service

SERVICES FOR SCHOOLS

Glossary of mathematical terms with word cards

Primary

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Contents

Introduction

The precise and appropriate use of subject specific vocabulary is an essential communication skill for learners and teachers of any subject. If you wish to communicate in a language other than your mother tongue, it is necessary to acquire knowledge of the vocabulary associated with that language, alongside the correct spelling and grammatical rules. The same applies to mathematics and this glossary has been developed by the Hampshire Mathematics Team to provide teachers with a reference point for the technical and subject specific language associated with mathematics. Everyday language in a mathematical context is also included to provide ideas for teachers to use with the word-card resource that accompanies this glossary.

This document provides word lists linked to vocabulary that appears in the National Curriculum for mathematics (2014) organised into key stage bands. Words in **bold** appear in the programmes of study and those in standard type appear in the non-statutory guidance section or are in general use in texts and resources.

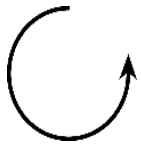
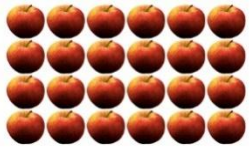
For each word, the year group and the National Curriculum domain in which it first appears is identified. This is not to say that the word is not used in other areas of mathematics or in subsequent year groups. Mathematics is a subject where a *spiral* curriculum is often advocated. Learners are expected to revisit concepts with ever increasing complexity, making connections across domains as they progress. The language associated with mathematics enables precise communication of ideas and concepts and provides one of the building blocks required by learners as they develop their understanding.

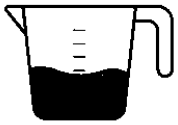
It is to be noted that not all the words in the glossary would be used in the classroom. This document provides a point of reference for teachers to ensure the language used is correct and precise and all concepts are taught with prior knowledge of meaning and definition.

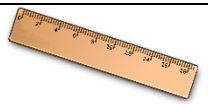
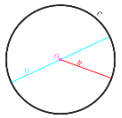
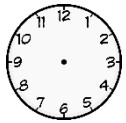
Glossary

Key Stage 1

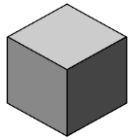
Word	Domain	Year	Meaning	Example
2-D shape	Geometry: properties of shapes.	1	A plane shape that has sides and vertices.	
3-D shape	Geometry: properties of shapes.	1	A solid shape that has faces, edges and vertices.	
Above	Geometry: position and direction.	1	A higher position than something else.	I put the box on the shelf **above** the desk.
Addend	Addition and subtraction.	1	A number to be added to another number.	8 + 3 = 11 14 + 21 + 8 + 0 = 43 3,8,14 and 21 are all **addends**.
Addition	Addition and subtraction.	1	The operation to combine two or more quantities to form another quantity (the sum or total). Addition is the inverse of subtraction and can be denoted with the symbol +.	addend + addend = total (sum).
After	Measurement.	1	A period of time describing one event following another. A description of the position of a number or object in a sequence.	We have lunch **after** our morning lessons.

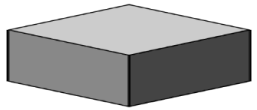
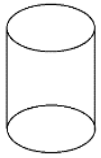
Word	Domain	Year	Meaning	Example
Afternoon	Measurement.	1	A period of time describing the time after noon, midday, until the evening (often sunset).	After lunch we have lessons in the **afternoon**.
Altogether	Addition and subtraction.	1	The sum or total of a set of objects or quantities.	I have 8 counters and you have 3, we have 11 counters **altogether**.
Amount	Measurement.	2	A quantity of something.	I have an **amount** of counters.
Analogue (clock)	Measurement.	2	A clock that shows a 1-12 clockface.	
Anti-clockwise	Geometry: position and direction.	2	The opposite direction to which the hands on an analogue clock travel.	
Around	Geometry: position and direction.	1	A description of turn.	The bus came **around** the corner.
Array	Multiplication and division.	1	An ordered collection of objects or *cells* organised into rows and columns. Links to the area of a rectangle.	
Associative	Addition and subtraction.	2	Addition or multiplication of three or more elements can be carried out in any order.	3 + (4 + 2) = (3 + 4) + 2 3 x (4 x 2) = (3 x 4) x 2

Word	Domain	Year	Meaning	Example
Backwards	Addition and subtraction. Measurement.	1	A direction of movement, sometimes back towards a starting point. This is often used on a number line to count from right to left.	He took a step **backward.** I count **backwards** from 10 to zero.
Before	Measurement. Number and place value.	1	A period of time describing one event preceding another. A description of the position of a number or object in a sequence.	7 is **before** 9 on the number line.
Between	Geometry: position and direction.	1	A description of the position of an object or number compared to at least two other objects that are positioned on either side.	5 is **between** 4 and 6 on a number line. *"My water bottle is **between** my book and my pencil."*
Block diagram	Statistics.	2	A simple format for representing statistical information. One block represents one observation.	
Calculate	Multiplication and division. Addition and subtraction.	1	Latin: calculare: to reckon or compute. Today we use calculate to mean work out a numerical answer to a problem.	I **calculated** that 8 plus 4 equals 12.
Capacity	Measurement.	1	The measure of the amount of liquid (or air or *pouring* materials such as sand) held in a vessel or container. Metric units include litres and millilitres.	
Categorical data	Statistics.	2	Data arising from situations where categories are used.	Data collected using the question: Which pets do you have from the following list?

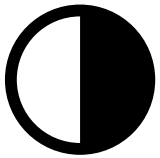
Word	Domain	Year	Meaning	Example
Category	Statistics.	2	A class or division of things sorted according to shared characteristics.	Which pets do you have from the following list? One **category** might be dogs.
Centigrade (ºC)	Measurement.	2	A unit for measuring temperature, based on the properties of water.	0ºC is the freezing point of water and 100ºC is the boiling point of water.
Centimetre (cm)	Measurement.	2	A metric measure of length that is one hundredth of a metre.	
Change (money)	Measurement.	2	The difference between the amount of money available and the amount of money spent.	£1 (100p) available 25p spent | 75p left over **change**
Chronological	Measurement.	1	Relating to events that occur in a time ordered sequence.	Tell the story in **chronological** order: *"First, I got up, then I had breakfast. I got dressed and then I went to school."*
Circle	Geometry: properties of shapes.	1	The set of all points that are a set distance from a central fixed point.	
Clock (face)	Geometry: position and direction.	1	The display on an analogue clock that shows the numbers 1-12 evenly spaced around the circumference.	
Clockwise	Geometry: position and direction.	1	The direction in which the hands on an analogue clock travel.	
Close to	Geometry: position and direction.	1	Description of the position of an object a short distance away.	Jack is standing **close to** the desk.

Word	Domain	Year	Meaning	Example
Coin	Measurement.	1	A circle, or polygon, with two different faces used as currency. Different values are assigned to different shaped and coloured coins.	
Collate	Statistics.	2	To put things together in a particular order.	1,2,3,4,5…. are **collated** (and ordinal)
Column (place value)	Number and place value.	2	Each column represents a decimal place value in our number system. These are ordered from right to left in increasing powers of 10.	In the number 375, there is a 3 in the hundreds column, a 7 in the tens **column** and a 5 in the ones column.
Combination (of coins)	Measurement.	2	A selection of items from a collection, the order does not matter.	10p = 2p + 5p + 2p + 1p 10p = 5p + 5p 10p = 2p + 2p + 2p + 2p = 2p
Combine	Addition and subtraction.	1	To merge or amalgamate two items or values.	3 and 7 **combine** to make 10.
Commutative	Addition and subtraction. Multiplication and division.	2	You can add or multiply a pair of numbers, regardless of their order. Addition and multiplication have the commutative property, subtraction and division do not. Commutativity is linked to associativity.	19 + 23 = 23 + 19 43 – 12 ≠ 12 – 43 2 x 7 = 7 x 2 10 ÷ 2 ≠ 2 ÷ 10

Word	Domain	Year	Meaning	Example
Compare	Number and place value.	1	To examine the difference between numbers, quantities, or values to decide if it is greater than, less than or equal.	
Cone	Geometry: properties of shapes.	2	A 3-D figure with a circular (oval) base and one vertex.	
Container	Measurement.	1	A vessel that can be used to hold or transport something.	
Continuous quantities	Fractions.	1	Data arising from measurements taken on a continuous variable.	Lengths of caterpillars. Mass of oranges.
Count	Number and place value.	1	The act of determining the quantity in a group. To say numbers in order while assigning a value to an item in a group. It is the basis of one-to-one correspondence.	
Cube	Geometry: properties of shapes.	1	A 3-D figure with six identical, square faces. Adjoining edges and faces are at right angles.	

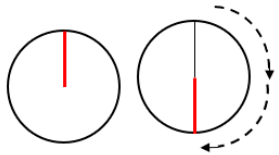
Word	Domain	Year	Meaning	Example
Cuboid	Geometry: properties of shapes.	1	A 3-D figure with three pairs of rectangular faces where opposite faces are the same. Adjoining edges and faces are at right angles.	
Cylinder	Geometry: properties of shapes.	2	A 3-D figure with straight parallel sides and a circular or oval cross section.	
Date	Measurement.	1	The specified day of a particular month in a calendar system.	3 April 2021. 03-04-2021.
Denomination	Measurement.	1	A description of a currency amount, usually for coins or bank notes.	Five pence is the **denomination** of a 5p coin.
Derive	Addition and subtraction.	2	To obtain the result from a given source. To create new knowledge from *old*, that is already known. *"If I know this, then what else do I know?"*	I know that 7 + 3 = 10 so 7 + 4 = 11; since 4 is one more than 3, I can **derive** this fact.
Difference	Addition and subtraction.	2	The result of subtracting one number from another. By how much one number differs from another.	minuend – subtrahend = **difference.** 11 – 4 = 7 11 and 4 have a difference of 7.
Difference between	Addition and subtraction.	1	The result of subtracting one number from another. How much one number differs from another.	The **difference between** 8 and 3 is 5. 8 – 3 = 5

Word	Domain	Year	Meaning	Example
Digit (value)	Number and place value.	2	A single whole number. (0 to 9) in a number 10 or larger.	The number 124 has three digits. Each **digit** has a place value.
Direction	Geometry: position and direction.	1	A course along which an object or person moves.	
Discrete (quantities)	Fractions. Number and place value. Statistics.	1	A quantity that can only take on certain values. Countable quantities.	 You can count 3 birds (not 3.5).
Distance between	Addition and subtraction.	1	The measure of the separation between two points.	A is 5cm from B.
Dividend	Multiplication and division.	1	In division, the number that is divided.	In 15 ÷ 3, 15 is the **dividend.**
Division	Multiplication and division.	1	1. An operation on numbers interpreted in a number of ways. Division can be sharing – the number 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.	6 ÷ 3 = 2 6 shared into 3 parts gives 2 per part. 6 grouped into parts of size 3 gives 2 groups.
Division	Multiplication and division.	1	2. On a scale such as a ruler where each division might represent a millimetre.	

Word	Domain	Year	Meaning	Example
Division sign ÷	Multiplication and division.	2	An operation on numbers interpreted either as sharing or grouping. Division is the inverse operation to multiplication.	12 ÷ 3 = 4 can be interpreted as 12 shared between 3 groups gives 4 in each group or 12 grouped into threes gives 4 groups.
Doubling	Multiplication and division.	1	Multiplying by two. Twice as much.	Double 3 is 6. 3 x 2 = 6
Down	Geometry: position and direction.	1	Toward a lower place.	I put the cup **down on** the table.
Edge	Geometry: properties of shapes.	2	A line segment, joining two vertices of a plane (2-D) figure. A line segment formed by the intersection of two plane (flat) surfaces.	A square has four **edges.** A cuboid has 12 **edges.**
Enumerate	Number and place value.	1	To determine the number of. To count.	 There are one, two, three, four, five fingers.
Equal (to)	Number and place value.	1	*is the same as* or *has the same value as*. The symbol is =.	2 + 7 is **equal** to 9. 2 + 7 = 9
Equal parts	Fractions.	1	Parts of a whole quantity that have the same value (or size).	

Word	Domain	Year	Meaning	Example
Equivalent (fraction)	Fractions.	2	Fractions with the same value as another.	$\frac{1}{2} = \frac{2}{4}$ one half is **equivalent to** two quarters.
Estimate	Number and place value.	2	To use approximate values to arrive at a rough or *close-to* answer.	17 + 4 ≈ 17 + 3 (= 20)
Even (number)	Number and place value. Multiplication and division.	1	An integer multiple of 2. A whole number that can be divided equally into two groups with no remainder.	8 = 2 x 4 (so 8 is **even**). 7.4 = 2 x 3.8 (so 7.4 is not even since it is not an integer). 17 = (2 x 8) + 1 (so 17 is not even, it is one more than a multiple of 2 and 17 ÷ 2 = 8 r 1).
Evening	Measurement.	1	The period of time at the end of the day between dusk and nightfall.	It was seven o'clock in the **evening**.
Event	Measurement. Statistics.	1	A description of something that has happened. A possible outcome of a statistical trial.	Measurement: events include having breakfast or writing a story to describe **events** in a chronological sequence. Statistics: getting a *head* when a coin is tossed
Face (of a 3-D shape)	Geometry: properties of shapes.	2	One of the flat surfaces of a 3-D shape.	A cube has six faces, each **face** being a square.
Far	Geometry: position and direction.	1	Description of the position of an object a long distance away.	Jack is standing **far** away from me.
Fewer (than)	Number and place value.	1	Describes a quantity that is less than another.	I have **fewer** counters than Jane.

Word	Domain	Year	Meaning	Example
First	Measurement.	1	Coming before all others in time or order. An ordinal number denoting the position in a list or sequence.	Jack came **first** in the race.
Fluency	Number and place value. Addition and subtraction. Multiplication and division.	2	To be mathematically fluent one must have a mix of conceptual and procedural understanding, together with a knowledge of facts to enable you to tackle problems appropriate to your stage of development confidently, accurately, and efficiently.	I can use my knowledge of number bonds to 10 to work out 90 – 10, since I know that 9 – 1 = 8, then 90 – 10 = 80. I do not need to count back from 90 to calculate this.
Forwards	Addition and subtraction. Measurement.	1	A direction of movement, sometimes from a starting point. This is often used on a number line to count from left to right.	He took a step **forwards**. I count **forwards** from zero to 10.
Fraction	Multiplication and division.	1	The result of dividing one integer by a second integer. The dividend is the numerator and the non-zero divisor is the denominator.	$\frac{1}{2}$
Gram (g)	Measurement.	2	The unit of mass equal to one thousandth of a kilogram.	An apple has a mass of 10**g**.
Greater than >	Number and place value.	2	An inequality used to compare two or more numbers, quantities, or values. It is used when a quantity or number is bigger or larger than the second or rest of the quantities or numbers.	18 > 5 Eighteen is **greater than** five.

Word	Domain	Year	Meaning	Example
Grouping	Multiplication and division.	1	Dividing a quantity into equal groups for division.	Six frogs **grouped** into three **groups** of two. 
Half	Fractions.	1	The result of division by 2.	$\frac{1}{2} = 1 \div 2$
Half (past)	Measurement.	1	Description of 30 minutes past an hour.	
Half (turn)	Geometry: position and direction.	1	A 180º turn.	
Hands (on a clock)	Measurement.	1	An *arm* that points to the numerals on a clock face to show the time.	The hour **hand** is pointing half way between the 3 and the 4 and the minute hand is showing *half past*. 
Heavier (than)	Measurement.	1	Comparing one mass to another.	The potato is **heavier** than the grape.
Heavy	Measurement.	1	A description of weight or mass.	This bag is **heavy**. It has a mass of 5kg.
Height	Measurement.	1	A description of distance, usually vertical.	He dropped the bag from a great **height**.

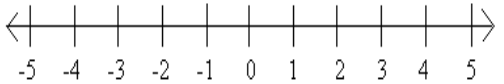
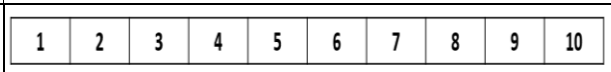
Word	Domain	Year	Meaning	Example
Hour	Measurement.	1	A unit of time. One twenty-fourth of a day. 1 hour = 60 minutes.	He walked for 2 hours. I waited one **hour** for the bus.
In front of	Geometry: position and direction.	1	A description of the position of an object or number compared to at least one other object positioned behind.	Peter was **in front of** me in the lunch queue.
Increase	Addition and subtraction.	1	Become greater in size, amount or quantity.	7 **increased** by 3 makes 10. 7 + 3 = 10
Infinite	Number and place value.	2	Of a number, always bigger than any (finite) number that can be thought of. Of a sequence or set, going on forever. The set of integers is an infinite set.	3 is one more than 2. 4 is one more than 3. 5 is one more than 4…. I can always find a number that is one more than yours (and one less).
Inside	Geometry: position and direction.	1	Describing the position of being within or the interior of an area.	Adam was waiting **inside** the classroom. Lucy found the counters **inside** the box.
Interpret	Addition and subtraction.	1	Decode or explain what a statement means.	I **interpret** 3 + 4 as three and four more.
Interpret	Statistics.	2	Give meaning to data in a real-life context.	 This graph shows that more people have a birthday in July than in December.

Word	Domain	Year	Meaning	Example
Interval (time)	Measurement.	2	The amount of time between two events.	The lesson is one hour long. It starts at 10am (event 1) and ends at 11am (event 2).
Inverse (operation)	Addition and subtraction. Multiplication and division.	2	Operations that *undo* each other. Operations, that when they are combined, leave the thing they are operating on unchanged.	6 + 5 – 5 = 6 6 x 10 ÷ 10 = 6
Kilogram (kg)	Measurement.	2	The base unit in mass in the SI (systeme international d'unites).	1kg = 1000g This bag of potatoes has a mass of **two kilograms**.
Least	Number and place value.	1	The smallest amount or quantity.	Anna has 5 pence, Peter has 8 pence and Tom has 20 pence. Anna has the **least** amount of money.
Left	Geometry: position and direction.	1	Relates to one side of an object.	I write with my **left** hand. The West side if the object is facing North.
Length	Measurement.	1	The extent of a line segment between two points.	This line is 3cm in **length**.
Less (than) <	Number and place value.	1	Describes a quantity or value that is smaller than another.	Eight is **less than** nine. 8 < 9
Light	Measurement.	1	A description of mass or weight. Is not heavy.	This apple is **light.** It has a mass of 10g.
Lighter (than)	Measurement.	1	Compares one mass to another.	The grape is **lighter than** the potato.

Word	Domain	Year	Meaning	Example
Litre	Measurement.	2	A metric unit used for measuring capacity. A litre is equivalent to 1000 millilitres. A litre is also equivalent to 1000 cm^3.	 This water bottle contains 1 litre
Long (-er)	Measurement.	1	Compares one length to another. Describes length.	The pencil is **longer** than the paper clip.
Many-to-one correspondence	Statistics.	2	A way of describing a mapping that has more than one output to one input.	One house ~ many inhabitants. One date ~ many people having their birthday on this date.
Mass	Measurement.	1	The amount of matter within a body. Mass differs from weight as mass remains constant and weight is dependent on gravity.	This apple has a **mass** of 10g.
Measure	Fractions. Measurement.	1	The size in terms of an agreed unit.	The pencil **measures** 12cm. 
Mental (method)	Addition and subtraction. Multiplication and division.	2	A way of carrying out a calculation supported with a few simple jottings rather than a formal written calculation.	14 + 16 is the same as 15 + 15 (near doubles **mental method)**.
Metre (m)	Measurement.	2	The base unit in length in the SI (systeme international d'unites).	A car is approximately four **metres** long. 

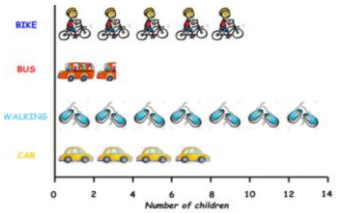
Word	Domain	Year	Meaning	Example
Middle	Geometry: position and direction.	1	A description of the position of a central object or quantity.	 The red counter is in the **middle** of the blue ones.
Millilitre (ml)	Measurement.	2	A unit of Measurement for capacity. One thousandth of a litre.	A medicine spoon has a capacity of **5 ml**. 
Minuend	Addition and subtraction.	1	A quantity or number from which another is subtracted.	**Minuend** – subtrahend = difference.
Minus	Addition and subtraction.	2	A name for the symbol – , representing the operation of subtraction.	Eleven **minus** nine equals 2.
Minute	Measurement.	1	A unit of time. One sixtieth of an hour. 1 hour = 60 minutes	He walked for 24 **minutes**. I waited five **minutes** for the bus.
Missing (number problems)	Addition and subtraction. Multiplication and division.	2	A number sentence where one or more of the numbers is missing.	$7 = \square - 9$
Month	Measurement.	1	A unit of time. One twelfth of a year. 1 year = 12 months.	My birthday is in the **month** of November.
More (than)	Number and place value.	1	Describes a quantity or value that is larger than another.	Nine is **more than** eight. 9 > 8

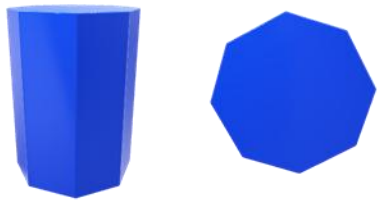
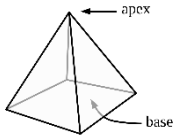
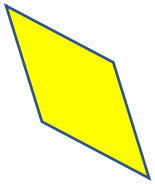
Word	Domain	Year	Meaning	Example
Morning	Measurement.	1	The period of time at the beginning of the day from sunrise to midday, or noon.	It was seven o'clock in the **morning**.
Most	Number and place value.	1	The greatest amount or quantity.	Anna has 5 pence, Peter has 8 pence and Tom has 20 pence. Tom has the **most** money.
Motion	Geometry: position and direction.	1	The action of movement.	The train was in **motion** as it pulled out of the station.
Movement	Geometry: position and direction.	1	The action of changing position or location.	The traffic jam finally showed some **movement** as the road cleared.
Multiple	Number and place value. Multiplication and division.	1	For any integers a and b, a is a multiple of b if a third integer exists such that a = b x c.	2 x 3 = 6 7 x 3 = 21 10 x 3 = 30 So 6, 21 and 30 are all **multiples** of 3.
Multiplication	Multiplication and division.	1	The operation to combine two or more quantities to form another quantity (the product). Multiplication is the inverse of division and can be denoted with the symbol *x*. It can be seen as the process of repeated addition.	2 + 2 + 2 + 2 = 8 4 groups of 2 is the same as 8. 4 x 2 = 8
Near	Geometry: position and direction.	1	Description of the position of an object that is close by.	Jack is standing **near** to me.
Next	Measurement.	1	Coming immediately after.	9 is **next** to 8 on the number line.

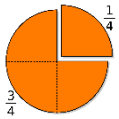
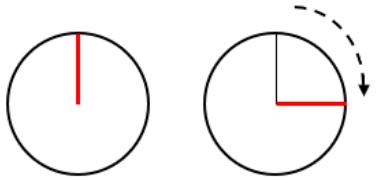
Word	Domain	Year	Meaning	Example
Non-standard units	Measurement.	1	A *non-typical* unit of Measurement that is not universally accepted as a benchmark.	This pencil is 9 cubes in length. This apple weighs the same as 12 cubes.
Non-unit (fraction)	Fractions.	2	A fraction where the numerator is greater than one. Describes more than one equal part.	$\frac{3}{4}$
Note (bank)	Measurement.	1	A paper or polymer note used as currency. Different monetary values are assigned to different coloured and sized notes.	
Number	Number and place value.	1	An arithmetical value expressed as a symbol. A quantity.	1, 5, 17, 3.5, -4 are all **numbers**.
Number bonds	Addition and subtraction.	1	A pair of numbers with a particular total.	All pairs of numbers with a sum of 10 are **number bonds** for ten. 1 and 9; 2 and 8; 3 and 7.
Number-line	Number and place value.	1	A line where numbers are represented by points upon it.	
Number-track	Number and place value.	1	A numbered track along which counters can be moved. The number in a region represents the single number of moves from the start.	
Numeral	Number and place value.	1	A symbol denoting a number.	1, 2, 3, 4, 5, …. **are all numerals**.

Word	Domain	Year	Meaning	Example
Object	Number and place value.	1	An item to be counted, ordered, grouped, or shared.	Counters. 
O'clock	Measurement.	1	Used to specify on the hour when telling the time.	School starts at **9 o'clock**.
Odd	Number and place value. Multiplication and division.	1	One more or less than an integer multiple of 2. A whole number that can be divided equally into two groups with a remainder of 1.	9 = (2 x 4) + 1 and 9 ÷ 2 = 4 r 1 (so 9 is **odd)**. 8 = 2 x 8 (so 8 is not odd as it is a multiple of 2).
One less	Number and place value.	1	A decrease of one from any number.	5 is **one less** than 6.
One more	Number and place value.	1	An increase of one from any number.	5 is **one more** than 4.
One-digit (number)	Addition and subtraction. Number and place value.	1	A number that contains only a *ones* digit.	0, 1, 2, 3, 4, 5, 6, 7, 8, 9.
Ones	Addition and subtraction. Number and place value.	2	The base unit for counting in any base.	The number 23 comprises 2 tens and 3 **ones**. It also comprises 23 **ones**.
One third	Fractions.	2	A fraction that describes one of three equal parts.	$\frac{1}{3}$

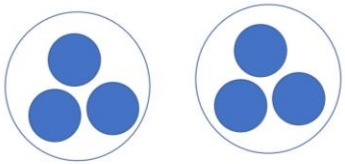
Word	Domain	Year	Meaning	Example
Operation	Addition and subtraction. Multiplication and division.	1	A rule to combine numbers in a set to produce another number. Addition, subtraction, multiplication and division are all operations.	3 + 6 = 9 Three plus six equals nine, plus is the **operation**.
Order (numbers)	Number and place value.	1	To place a set of numbers in a sequence according to some rule.	10, 8, 4, 0 are in descending **order** of size.
Ordinal number	Number and place value.	2	A term that describes a position within an ordered set.	I am third in the line. First, second, third are all **ordinal** numbers.
Orientation	Geometry: properties of shapes.	1	How a shape is positioned (often according to a grid or page alignment).	This triangle is *upside down* ~ this is the **orientation** of the triangle. 
Orientation	Geometry: position and direction.	2	The direction in which something is positioned with respect to a grid or directional system.	I am facing North, I can change my **orientation** by turning to face East.
Outside	Geometry: position and direction.	1	Describing the position of being without or the exterior of an area.	Adam was waiting **outside** the classroom. Lucy found the counters laying **outside** of the box.
Partition	Number and place value.	2	To separate into subsets. To split a number into component parts.	The number 38 can **be partitioned** into 30 + 8 or 19 + 19.
Pattern	Number and place value.	1	A systematic arrangement of numbers, shapes, or other items according to a rule.	
Pence(p)	Measurement.	2	A unit of money where 100 p = £1.	I spent **50p** on a comic.

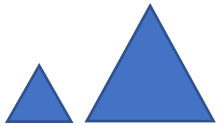
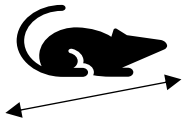
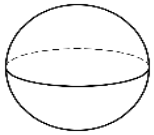
Word	Domain	Year	Meaning	Example
Pictogram	Statistics.	2	A format for representing statistical information where pictures, symbols or icons are used to represent objects.	
Pictorial	Number and place value.	1	A visual representation of a piece of mathematics.	This array shows 3 x 3 **pictorially**. 
Place holder (zero)	Number and place value.	2	In decimal notation, the zero numeral is used as a place holder to denote the absence of a particular power of 10.	The number 30 has three tens and no ones. The zero in the ones column shows that there are no ones in thirty. (Although we can think of 30 as thirty ones, it is a multiple of 10 and hence the ones can be grouped into complete tens).
Place value	Number and place value.	1	The value of the digit that relates to its position or place in a number.	In the number 36 the digits represent 3 tens and 6 ones respectively.
Plus	Addition and subtraction.	1	An alternative word for 'add'.	6 + 3 = 9 Six **plus** three equals nine.
Polygon	Geometry: properties of shapes.	2	A closed plane figure bounded by straight lines.	This is a pentagon. It is a five-sided **polygon**. 
Position	Geometry: position and direction.	1	A description of the place in which a shape, number or object appears in relation to others.	The triangle moved to the right and changed its **position**.

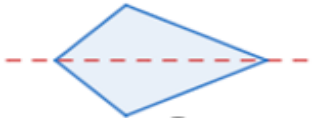
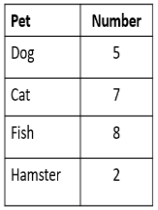
Word	Domain	Year	Meaning	Example
Pound (£)	Measurement.	2	A unit of money worth 100 pence.	The cinema ticket costs **£5**.
Prism	Geometry: properties of shapes.	2	A 3-D shape bounded by two congruent (identical) polygons that are parallel (the bases) and parallelograms (the lateral faces) formed by joining the corresponding vertices of polygons. Prisms can be *sliced* along their length and always produce the same cross-section.	This **prism** has a cross section that is an octagon. 
Programme (robot)	Geometry: position and direction.	2	A set of instructions or coded commands to tell a device or robot like a turtle what tasks to perform.	turtle.forward(.) and turtle.left(.)
Put together	Addition and subtraction.	1	Describes combining numbers, objects, or quantities.	The 3 and the 4 have been **put together** to make 7.
Pyramid	Geometry: properties of shapes.	1	A 3-D shape with a polygon as its base and all other faces as triangles that meet at the *apex*.	
Quadrilateral	Geometry: properties of shapes.	2	A polygon with four sides.	
Quantity	Number and place value.	1	An amount (of objects, material etc).	I have a **quantity** of marbles.

Word	Domain	Year	Meaning	Example
Quarter	Fractions.	1	When an amount or item is divided into four equal groups, each group is 'one quarter' of the original whole. Also 1 ÷ 4.	
Quarter (past)	Measurement.	2	Description of 15 minutes past an hour.	We go out to break at **quarter past** ten.
Quarter (to)	Measurement.	2	Description of 15 minutes to an hour.	Lunch-time finishes at **quarter to** one.
Quarter (turn)	Geometry: position and direction.	1	A 90º turn.	
Ratio (for every)	Statistics.	2	A part to part comparison. The ratio of a to b is written a:b.	In a recipe for pastry, fat and flour are mixed in the **ratio** 1:2. This means that for every one unit of fat, we need 2 units of flour. In other words, we need twice as much flour as fat.
Reason (mathematical)	Number and place value. (all domains)	2	The connection between different pieces of mathematics that enable you to make sense of, and explain, the problem. A chain of reasoning often includes a *because* statement.	I know that a kite is a quadrilateral because it has four sides.

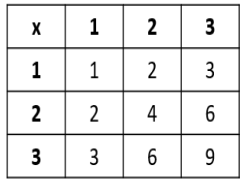
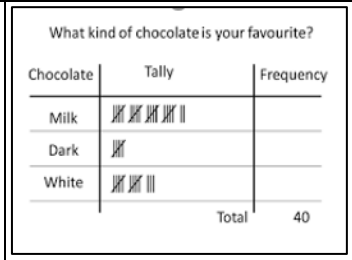
Word	Domain	Year	Meaning	Example
Recall	Addition and subtraction. (all domains)	2	Remember and use a key fact stored in long term memory.	In order to work out 3 + 5, I need to **recall** my number bonds within 10.
Record	Measurement.	1	Create notes or pictures of an event.	*"I have 3 worms measuring 5cm, 6cm and 7cm **recorded** in my table."* Worm number / Worm length 1 / 5cm 2 / 6cm 3 / 7cm
Rectangle	Geometry: properties of shapes.	1	A parallelogram with four equal interior angles of 90º. Opposite sides are equal in length.	
Related fact	Addition and subtraction. Multiplication and division.	2	Families of facts that are connected and enable something that is unknown to be built from something that is already known.	10 x 2 = 20 is a **fact related to** 20 ÷ 2 = 10
Repeated (addition)	Multiplication and division.	2	Adding equal groups together. An early model for multiplication.	3 + 3 + 3 + 3 = 12 is the same as 4 x 3 = 12
Right	Geometry: position and direction.	1	Relates to one side of an object.	I write with my **right** hand. The East side if the object is facing North.
Right-angle	Geometry: position and direction.	2	An angle of 90º.	

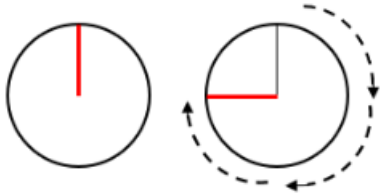
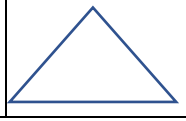
Word	Domain	Year	Meaning	Example
Rotation	Geometry: position and direction.	2	A turn, usually about a fixed point.	
Ruler	Measurement.	1	An instrument to measure or draw a length.	
Scales (weighing)	Measurement.	1	An instrument to measure weight or mass.	
Seconds	Measurement.	1	A Measurement of time. There are 60 seconds in one minute.	The winner of the race finished in 34 **seconds**.
Sequence	Measurement. Number and place value.	1	A particular order in which related events, numbers or objects follow each other.	2 , 4 , 6 , 8 , 10 , 12
Sharing	Multiplication and division.	1	One model for the process of division (sharing equally).	 Six counters shared equally into two groups
Short (-er)	Measurement.	1	Compares one length to another. Describes length.	The pencil is **shorter than** the ruler.

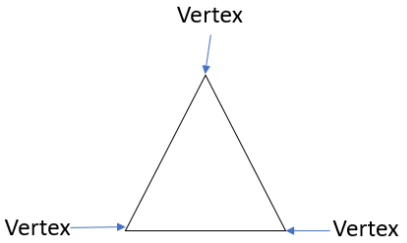
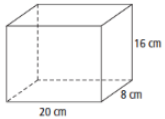
Word	Domain	Year	Meaning	Example
Side (of a 2-D shape)	Geometry: properties of shapes.	2	A straight edge or line between two fixed vertices on a plane (2-D) shape.	The square has four **sides**. 
Similar (shape)	Geometry: properties of shapes.	1	Two shapes where one is an exact enlargement of the other. Side lengths are in the same proportion. Internal angles are the same.	
Size	Geometry: properties of shapes. Measurement.	1	The relative magnitude of an object. How big something is.	 3cm
Solution	Number and place value.	1	Find an answer to a problem.	36 subtract 6 is 30 ~ I have solved the problem!
Sphere	Geometry: properties of shapes.	1	A round 3-D shape.	
Square	Geometry: properties of shapes.	1	A plane figure with four equal straight sides and four right angles.	
Standard units	Measurement.	1	Uniform units that are agreed throughout a community.	The metre is a **standard unit** of length. The handspan is not, as this can vary from person to person.

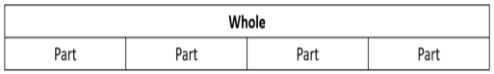
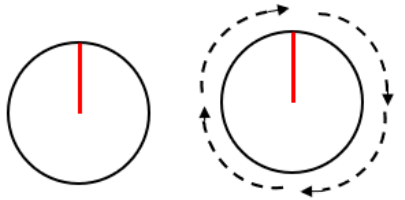
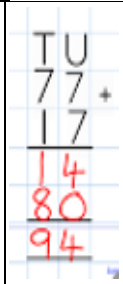
Word	Domain	Year	Meaning	Example
Statements	Addition and subtraction. Multiplication and division.	1	A definite or clear expression (of mathematical fact).	3 + 4 = 7
Subtraction	Addition and subtraction.	1	The inverse operation to addition. Finding the difference when comparing magnitude. Take away.	7 – 4 = 3
Subtrahend	Addition and subtraction.	1	A quantity or number to be subtracted from another.	minuend – **subtrahend** = difference
Sum	Addition and subtraction.	2	The result of adding two or more numbers together.	3 + 4 = 7 The **sum** of three and four is seven.
Symmetry (line)	Geometry: properties of shapes.	2	A line of symmetry bisects a 2-D shape to give two equal (mirror) parts. Shapes that can be folded exactly in half can be said to have reflective symmetry.	
Table (Statistics)	Statistics.	2	An orderly arrangement of information (or data), numbers or letters usually in rows and columns.	

Pet	Number
Dog	5
Cat	7
Fish	8
Hamster	2

Word	Domain	Year	Meaning	Example
Tables (multiplication)	Multiplication and division.	2	An array setting out numbers that multiply together to form the entries in the array.	
Take away	Addition and subtraction.	1	The inverse operation to addition. Remove a number of items from a set.	7 **take away** 3 leaves 4. 7 – 3 = 4
Tall (-er)	Measurement.	1	Compares one height to another. Describes length.	The lady **is taller** than the child.
Tally chart	Statistics.	2	A way of recording objects in a group. The marks represent the number of objects counted, usually by drawing vertical lines and crossing the fifth count with a diagonal strike through.	
Temperature	Measurement.	2	A measure of the hotness of a solid, liquid or gas.	The water was boiling. Its **temperature** was 100ºC.
Tens	Addition and subtraction. Number and place value.	2	The base group for counting in a decimal system.	The number 23 has 2 **tens** and 3 ones.

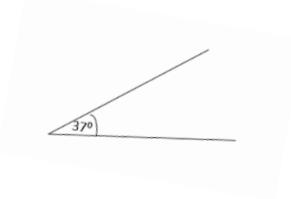
Word	Domain	Year	Meaning	Example
Thermometer	Measurement.	2	An object used to measure temperature.	
Three-quarters	Fractions.	2	Three equal shares from four equal groups.	$\frac{3}{4}$
Three-quarter (turn)	Geometry: position and direction.	1	A 270º turn.	
Time	Measurement.	1	A measure of change marking the duration of events.	
Today	Measurement.	1	The day after yesterday.	She is going swimming **today**.
Tomorrow	Measurement.	1	The day after today.	He will go to school **tomorrow**.
Top	Geometry: position and direction.	1	The highest point or position.	He put the book on **top** of the pile.
Total	Addition and subtraction.	1	The aggregate or sum found by adding.	The **total** of 7 and 3 is 10. 7 + 3 = 10
Triangle	Geometry: properties of shapes.	1	A 2-D closed shape with three straight sides.	

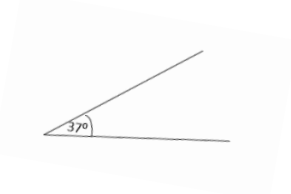
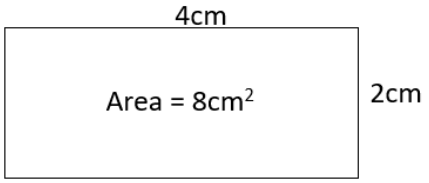
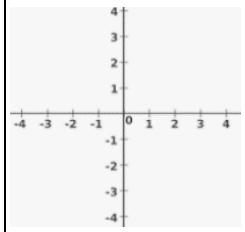
Word	Domain	Year	Meaning	Example
Two-digit (number)	Addition and subtraction. Number and place value.	1	A number made up of at least one ten and between zero and nine ones.	Any number between 10 and 99.
Up	Geometry: position and direction.	1	Toward a higher place.	He puts the box **up** on the shelf.
Vertex (vertices)	Geometry: properties of shapes.	2	The point at which two or more lines intersect.	
Vertical	Geometry: properties of shapes.	2	At right angles to the horizonal plane. The *up-down* direction on a graph or grid.	
Volume	Measurement.	1	The amount of space enclosed by a closed 3-D shape or solid.	
Week	Measurement.	1	A period of seven days.	The school holidays last for six **weeks**.

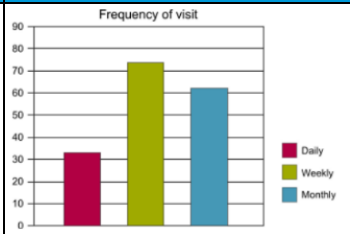
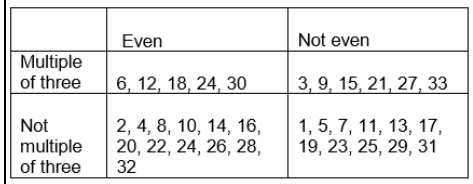
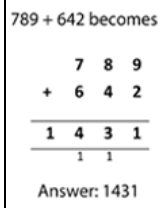
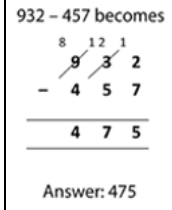
Word	Domain	Year	Meaning	Example
Weight	Measurement.	1	A measure of how heavy or light something is. Mass differs from weight as mass remains constant and weight is dependent on gravity.	The **weight** of the apple is 10 grams.
Whole	Fractions.	1	All equal parts together make the whole. A full set.	
Whole(turn)	Geometry: position and direction.	1	360º	
Written (method)	Addition and subtraction. (Multiplication and division at Key Stage 2).	2	A formal, recorded, method for setting out a calculation, using place value to align the elements.	
Year	Measurement.	1	The time taken by the earth to make one revolution around the sun. 365 days.	He was five **years** old.
Yesterday	Measurement.	1	The day before today.	He went to school **yesterday.**

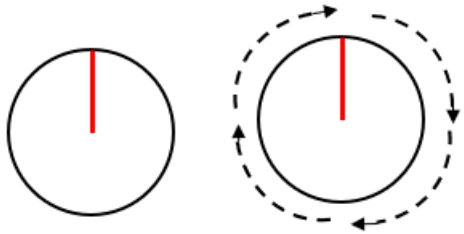
Word	Domain	Year	Meaning	Example
Zero	Addition and subtraction. Number and place value.	1	When used as a counting number, means that no objects are present. It is the only number on the number-line that is neither negative nor positive.	Seven and **zero** is the same as seven. 7 + 0 = 7

Lower Key Stage 2

Word	Domain	Year	Meaning	Example
12-hour clock	Measurement.	3	The 24 hours of a complete day are divided into two 12-hour periods (am and pm).	Lunchtime finishes at 1 pm.
24-hour clock	Measurement.	3	The time is shown as how many hours and minutes since midnight.	Lunchtime finishes at 13:00.
Acute	Geometry: properties of shapes.	3	An angle between 0º and 90º.	
Algebraically	Measurement.	4	The part of mathematics that deals with generalised arithmetic. Letters or symbols are used to denote variables and unknown numbers.	a + b = 15
Am	Measurement.	3	The time of day between midnight and noon (ante meridiem – before noon).	Our maths lesson starts at **9 am.**
Analogue clock	Measurement.	4	A clock that shows a 1-12 clockface.	

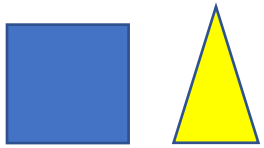
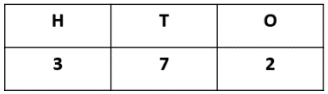
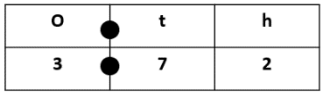
Word	Domain	Year	Meaning	Example
Angle	Geometry: properties of shapes.	3	A measure of rotation.	
Area	Measurement.	4	A measure of the size of a plane (flat) surface. It is usually measured in square units such as cm^2.	
Associative	Addition and subtraction. Multiplication and division.	3	An operation on three or more numbers is associative if the order in which the calculation is carried out does not change the outcome. Addition and multiplication are associative. Subtraction and division are not.	3 x (7 x 2) = (3 x 7) x 2 3 + (7 + 2) = (3 + 7) + 2
Axis (-es)	Geometry: position and direction.	4	A fixed, reference line along which or from which distances or angles are taken.	

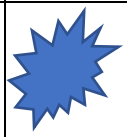
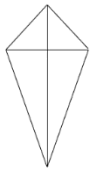
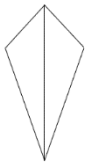
Word	Domain	Year	Meaning	Example
Bar chart	Statistics.	3	A format to represent statistical information. Bars, of equal width but varied height, represent frequencies.	
Carroll diagram	Geometry: properties of shapes.	3	A sorting diagram named after Lewis Carroll, author and mathematician, in which numbers (or objects) are classified as having a certain property or not having that property.	
Classify	Geometry: properties of shapes.	4	To arrange a group of people or things into classes or categories according to a common property.	I grouped the shapes into two classes, ones with three sides and ones with four sides. I **classified** the shapes.
Columnar (addition)	Addition and subtraction.	3	A formal, recorded, method for setting out an addition calculation, using place value to align the elements.	
Columnar (subtraction)	Addition and subtraction.	3	A formal, recorded, method for setting out a subtraction calculation, using place value to align the elements.	

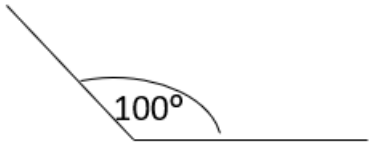
Word	Domain	Year	Meaning	Example
Complete turn	Geometry: properties of shapes.	3	A turn of 360º.	
Continuous data	Statistics.	4	Data arising from measurements taken on a continuous variable such as height in cm of plants, this data may be grouped into touching but non-overlapping categories.	Heights of pupils (x cm) can be grouped into: $130 \leq x < 140$ $140 \leq x < 150$ $150 \leq x < 160$.
Coordinate	Geometry: position and direction	4	In geometry, a coordinate system is a system which uses one or more numbers, or coordinates, to uniquely determine the position of a point in space. We use a coordinate grid to define the horizontal and vertical distance from a starting point or origin (0,0).	(3, 2) is the coordinate that describes the point that is 3 units in the positive horizontal distance and 2 units in the positive vertical direction from the origin (0,0).
Correspondence (problems)	Multiplication and division.	3	Problems in which m objects are connected to n objects. They often require you to list all possibilities.	3 hats, 4 coats, how many different outfits?
Decimal (cm and mm)	Geometry: properties of shape.	3	Relating to base ten. In the context of geometry, relates to drawing lines in cm and mm.	3.7 is a **decimal** number representing 3 ones and 7 tenths. 3.7 cm represents 3cm and 7 tenths of a cm.

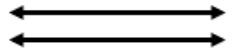
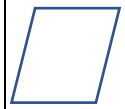
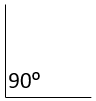
Word	Domain	Year	Meaning	Example
Decimal notation	Fractions and decimals.	4	The use of columns of powers of ten together with a decimal point to denote whole and part numbers.	52.5 can be written as: 5 tens, 2 ones and 5 tenths.
Decimal place	Fractions and decimals.	4	The decimal point divides whole and part numbers and is placed to the right of the ones column. Each column after the decimal point (to the right) is a decimal place.	The decimal fraction 0.12 has two **decimal places**. It is equivalent to 1/10 + 2/100.
Denominator	Fractions.	3	In the notation of common fractions, the number written below the line, ie the divisor. It *names* the fraction by defining how many equal parts there are.	$\frac{1}{3}$ Three is the **denominator**, the whole is divided into three equal parts.
Digital (clock)	Measurement.	4	A clock that displays the time as hours and minutes passed, usually since midnight.	Four thirty in the afternoon is displayed as: **16:30.**
Dimension	Measurement.	4	A measurement of length in one direction (could be on a polygon or polyhedron) such as length, width or height.	This square has two **dimensions**, length, and width. 
Discrete data	Statistics.	4	Data resulting from situations involving discrete variables, ie things that can be counted with no interim values possible.	The number of each colour star: Red = 4 Green = 1 Blue = 2. 
Dissect	Geometry: properties of shapes.	4	To cut into parts.	

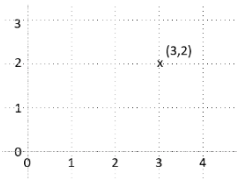
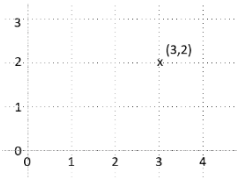
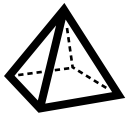
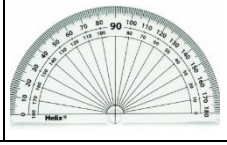
Word	Domain	Year	Meaning	Example
Distributive law	Multiplication and division.	4	The distributive property lets you multiply a sum by multiplying each addend separately and then adding the two products. This is linked to the order of operations and to partitioning.	3 x 8 = 3 x (2 + 6) **3 x (2 + 6) = 3 x 2 + 3 x 6** 3 x 2 + 3 x 6 = 6 + 18 6 + 18 = 24 24 = 3 x 8
Equilateral	Geometry: properties of shapes.	4	Of equal length.	This triangle has all sides of equal length. It is called an **equilateral** triangle. 
Equivalent fraction	Fractions and decimals.	4	Fractions with the same value as another.	$\frac{3}{6} = \frac{2}{4}$
Expression	Addition and subtraction. Multiplication and division. Algebra.	4	A mathematical form expressed symbolically. (There will not be an equals sign as this would make it an equation.)	**3 a + b**
Factor (pairs)	Multiplication and division.	4	When a number can be expressed as the product of two whole numbers, these are the factors of the first.	24 = 3 x 8 3 and 8 are **factors** of 24
Four-digit (number)	Number and place value. Addition and subtraction.	4	A number comprising of at least one thousand and no more than nine thousands.	**2568** This number has **four digits**.

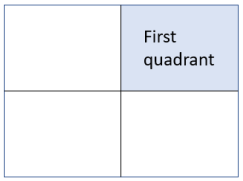
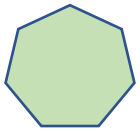
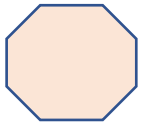
Word	Domain	Year	Meaning	Example
Geometric shapes	Geometry: properties of shapes.	4	Geometry is the aspect of mathematics concerned with the properties of space and figures or shapes in space. Geometric shapes are ones where their properties can be described in terms of geometric language.	Squares and triangles are **geometric shapes.** 
Half-turn	Geometry: properties of shapes.	3	A turn of 180º.	
Horizontal (line)	Geometry: properties of shapes.	3	Parallel to the horizon. At right angles to a vertical (line).	This line is **horizontal**. 
Hundreds	Number and place value. Addition and subtraction.	3	The third column to the left relative to the decimal point in a number.	There are 3 **hundreds** in this number 
Hundredth	Fractions and decimals.	4	The result of dividing by 100. The second column to the right relative to the decimal point.	There are 2 **hundredths** in this number. 
Integer	Number and place value. Multiplication and division.	4	Any positive or negative whole numbers and zero.	-3, -8, 4, 17 are all **integers**.

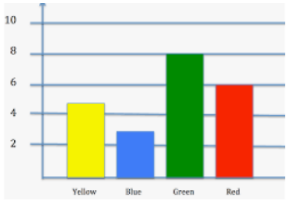
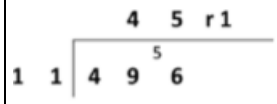
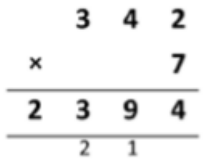
Word	Domain	Year	Meaning	Example
Inverse operation	Addition and subtraction. Multiplication and division.	3	Operations that, when they are combined, leave things unchanged. Addition and subtraction and inverse operations. Multiplication and division are inverse operations.	3 + 7 – 7 = 3 3 x 7 ÷ 7 = 3
Irregular	Geometry: properties of shapes.	4	Not regular. In the context of shapes, irregular shapes do not have equal side lengths or equal interior angles.	
Isosceles	Geometry: properties of shapes.	4	A triangle (or trapezium) in which two sides have the same length and consequently two equal angles.	
Kilometre (km)	Measurement.	3	One thousand metres.	Jack travelled 3 **kilometres** to school.
Kite	Geometry: properties of shapes.	4	A quadrilateral with two pairs of equal, adjacent sides whose diagonals consequently intersect at right angles.	
Leap year	Measurement.	3	A year occurring once every four years that has 366 days, with 29th February as the extra day.	The year 2020 was a **leap year**.
Line of symmetry	Geometry: properties of shapes.	4	Mirror lines. These are within a shape and are the lines along which a shape can be folded exactly in half.	

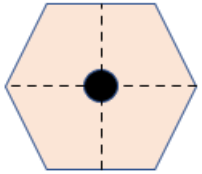
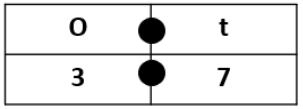
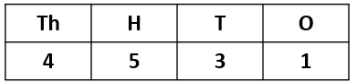
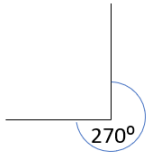
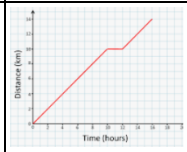
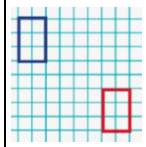
Word	Domain	Year	Meaning	Example
Metric measures	Measurement.	4	Units of measure in the metric system. Metric measures use base 10.	Metres and litres are **metric measures**. 1m = 100cm 1l = 1000ml
Midnight	Measurement.	3	12 o'clock at night. The transition time from one day to the next.	Jane was fast asleep in bed at **midnight**.
Millimetres (mm)	Measurement.	3	One thousandth of a metre.	The worm measures 50**mm.** 
Negative (number)	Number and place value.	4	A number less than zero. Numbers to the left of zero on a horizontal number line.	-8, -17, -3.5 are all **negative numbers**.
Non-symmetrical (shape)	Geometry: properties of shapes.	3	A shape that has no lines of symmetry.	A parallelogram has no (folding) lines of symmetry. 
Numerator	Fractions.	3	In the notation of common fractions, the number written above the line, ie the dividend. It tells you the number of equal parts out of the whole.	$\frac{1}{3}$ One is the **numerator**; the whole is divided into three equal parts.
Obtuse	Geometry: properties of shapes.	3	An angle greater than 90º but less than 180º.	

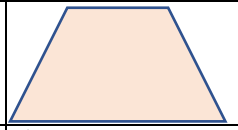
Word	Domain	Year	Meaning	Example
Operator (fractions of)	Fractions.	3	A mathematical action. In the context of fractions this links to fractions as division.	$\frac{1}{2}$ is the same as 1 ÷ 2. He divided the apple in half.
PM	Measurement.	3	The time of day between noon and midnight (post meridiem – after noon).	The TV programme starts at 8**pm**.
Parallel	Geometry: properties of shapes.	3	In plane (flat or Euclidean) geometry, two lines or surfaces that remain equidistant.	These lines are **parallel**. 
Parallelogram	Geometry: properties of shapes.	4	A quadrilateral whose opposite sides are parallel and consequently equal in length.	
Partitioning	Number and place value.	3	To separate a set into subsets; to split a number into component parts.	The number 36 can be **partitioned** in different ways. 36 = 30 + 6 36 = 15 + 21
Perimeter	Measurement.	3	The length of a boundary of a closed shape.	The length of this rectangle is 5cm. The width of this rectangle is 2cm.  The **perimeter** is 5+2+5+2 = 14cm.
Perpendicular	Geometry: properties of shapes.	3	A line or plan that is at right angles to another line or plane.	These lines are **perpendicular** to each other. 

Word	Domain	Year	Meaning	Example
Plot	Geometry: position and direction.	4	To use a grid or coordinate system to define the position of a point in space.	The point (3,2) has been **plotted** on this grid. 
Point	Geometry: position and direction.	4	An element in geometry that has position but no magnitude (size).	This shows the **point** (3,2). 
Polyhedron	Geometry: properties of shapes.	3	A closed, solid figure bounded by surfaces (faces). Its faces meet in line segments (edges). Its edges meet at points (vertices).	
Positive (number)	Number and place value.	4	A number greater than zero. Numbers to the right of zero on a horizontal number line.	3, 8, 742, 19.5 are all **positive numbers**.
Proportion	Fractions and decimals.	4	A part to whole comparison.	The **proportion** of this circle that has been shaded in is one half. 
Protractor	Geometry: properties of shapes.	4	An instrument for measuring angles.	

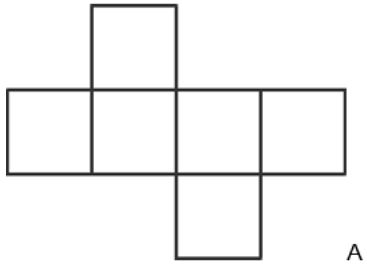
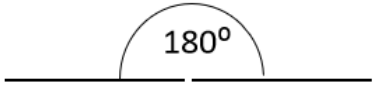
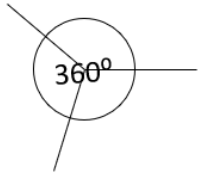
Word	Domain	Year	Meaning	Example
Quadrant (first)	Geometry: position and direction.	4	The first of four regions into which a plane is divided by the *x* and *y* axes in a (Cartesian) coordinate system.	
Quadrilateral	Geometry: properties of shapes.	4	A polygon with four straight sides.	
Rectilinear	Measurement.	4	Bounded by straight lines. A closed rectilinear shape is also a polygon.	
Regular	Geometry: properties of shapes.	4	Having sides of equal length and internal angles of equal size.	
Rhombus	Geometry: properties of shapes.	4	A parallelogram with all sides equal and two pairs of opposite equal internal angles.	
Roman numeral	Measurement.	3	A system of *numerals* used in the ancient Roman Empire where capital letters denoted cardinal numbers. There was no zero and therefore no place value system.	Eighteen in **roman numerals** is written as 10+5+1+1+1. XVIII
Round (number)	Number and place value.	4	In the context of a number, to express that number to a required degree of accuracy.	384 **rounded** to the nearest hundred is 400.

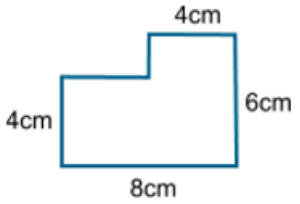
Word	Domain	Year	Meaning	Example
Scaled bar chart	Statistics.	3	Bar charts with axes scaled in steps other than one.	The scale on this bar chart goes up in steps of two. 
Scalene	Geometry: properties of shapes.	4	A triangle with no two sides equal and consequently no two angles equal.	
Scaling (including scale drawing)	Multiplication and division.	3	To enlarge or reduce a number, quantity or measurement by a given amount (called a scale factor).	3 x 2 can be thought of as *twice three*. Three has been **scaled** up by a factor of 2.
Short division	Multiplication and division.	3	A compact formal written method of division.	
Short multiplication	Multiplication and division.	3	A simple multiplication by a one-digit number, with the working set out in place value columns (compact form).	
Simplify (fraction)	Fractions and decimals.	4	Reduce a fraction to its simplest form.	$\frac{6}{8}$ reduced to the **simplest form** is $\frac{3}{4}$.

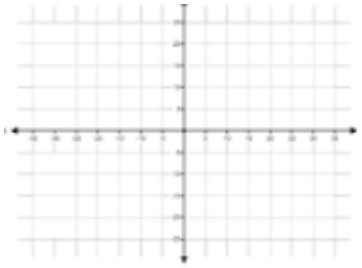
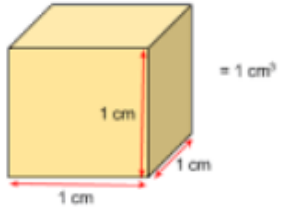
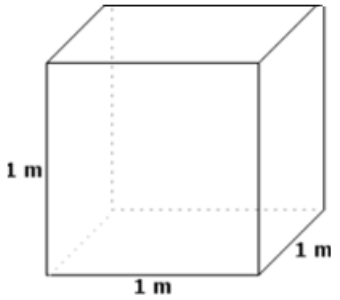
Word	Domain	Year	Meaning	Example
Symmetrical (shape)	Geometry: properties of shapes.	3	A plane figure has symmetry if it is invariant under a reflection or a rotation, ie if the effect of the reflection or rotation is to produce an identical-looking figure in the same position.	
Tenth	Number and place value. Fractions.	3	The result of dividing by 10. The first column to the right relative to the decimal point.	This number has 7 **tenths**. 
Thousands	Number and place value.	4	The fourth column to the left relative to the decimal point in a number.	This number has 4 **thousands**. 
Three-digit (number)	Number and place value.	3	A number comprising of at least one hundred and no more than nine hundreds.	865 is a **three-digit** number.
Three-quarter-turn	Geometry: properties of shapes.	3	A turn of 270º.	
Time graphs	Statistics.	4	A graphical representation of data changing over time.	
Translation	Geometry: position and direction.	4	A transformation in which every point of a body moves the same distance in the same direction. A transformation specified by distance and direction (vector).	

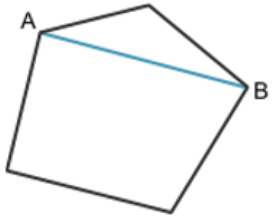
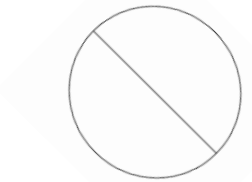
Word	Domain	Year	Meaning	Example
Trapezium	Geometry: properties of shapes.	4	A quadrilateral with exactly one pair of parallel sides.	
Unit fraction	Fractions and decimals.	4	A proper fraction with a numerator of one.	$\frac{1}{4}$ is a **unit fraction** since it has a numerator of *1*.
Vertical (line)	Geometry: properties of shapes.	3	A line at right angles to the horizontal plane.	This line is **vertical**. 
Whole number	Number and place value. Fractions and decimals.	4	A non-zero number with no digits to the right relative to the decimal point.	7, 53, 100, 5672 are all **whole numbers**.

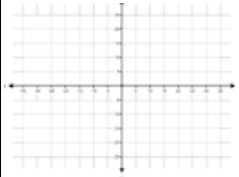
Upper Key Stage 2

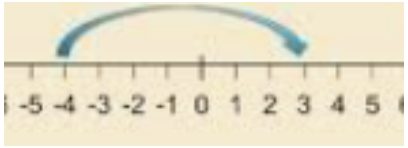
Word	Domain	Year	Meaning	Example
2-D representation	Geometry: properties of shapes.	5	Also called a *net*. A plane figure composed of polygons which by folding and joining can form a polyhedron.	 A net of a cube
Angles at a point (on a straight line)	Geometry: properties of shapes.	5	The sum of the angles at a point on a line is 180º.	
Angles at a point (in a whole turn)	Geometry: properties of shapes	5	The sum of the angles at a point for a complete turn is 360º.	
Brackets	Addition, subtraction, multiplication and division.	6	Symbols used to group numbers in arithmetic or letters and numbers in algebra to indicate that certain operations have priority.	2 x (3 + 4) = 2 x 7 = 14 2 x 3 + 4 = 6 + 4 = 10 The **brackets** give priority to the addition over the multiplication.
Circumference	Geometry: properties of shapes.	6	The distance around a circle (its perimeter).	

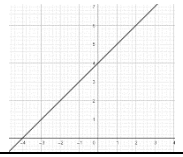
Word	Domain	Year	Meaning	Example
Common factor	Multiplication and division.	5	A number which is a factor of two or more other numbers.	3 is a **common factor** of the numbers 9 and 30.
Common multiple	Multiplication and division.	6	An integer which is a multiple of two or more other integers.	24 is a **common multiple** of 2,3,4,6,8 and 12.
Complement (of a number)	Addition and subtraction. Fractions, decimals, and percentages.	5	Pairs of numbers that sum to another number (number bonds).	67 + 33 = 100 67 and 33 are **complements** in 100.
Composite number	Multiplication and division.	5	A whole number that is the product of other whole numbers, excluding 1. This means that 1 and prime numbers are not composite. A composite number has more than two factors.	2 x 6 = 12 and 3 x 4 = 12 12 is a **composite number**.
Composite shape	Geometry: properties of shapes.	5	A shape formed by combining two or more shapes.	
Compound unit (speed)	Measurement.	6	A measure with two or more dimensions is a compound measure. Speed is calculated as distance ÷ time.	The car travelled at 50 km/h. The speed is given in kilometres per hour.
Conjecture	Reasoning. Fractions, decimals, and percentages.	6	An educated guess (!) of a particular result, which is, as yet, unverified.	2, 4, 6, 8, 10…. **Conjecture**: the next number will be 12 because the sequence goes up in 2s.

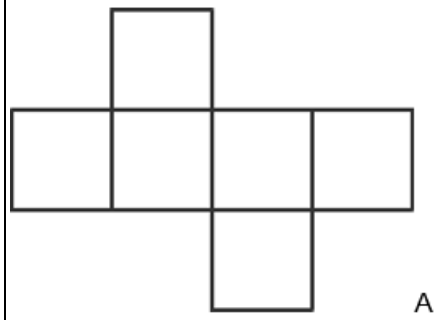
Word	Domain	Year	Meaning	Example
Coordinate plane	Geometry: position and direction.	6	Two axes at right angles to each other are used to define the position of a point in a plane. The Cartesian coordinate system uses (x,y) to define how far horizontally and vertically a point lies from the origin (0,0).	
Cube number	Multiplication and division.	5	A number that can be expressed as the product of three equal integers.	27 = 3 x 3 x 3 27 = 3^3 27 is a **cube number**.
Cubic centimetre (cm^3)	Measurement.	6	A unit of volume. The 3-D space equivalent to a cube with edge length 1cm.	
Cubic metre (m^3)	Measurement.	6	A unit of volume. The 3-D space equivalent to a cube with edge length 1m.	

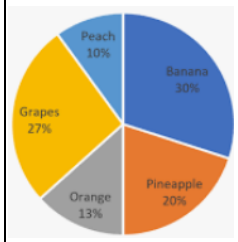
Word	Domain	Year	Meaning	Example
Decimal fraction	Fractions, decimals and percentages.	6	Tenths, hundredths, thousandths, etc, represented by digits following a decimal point.	0.125 is a **decimal fraction**. It is equivalent to 1/10 + 2/100 + 5/1000 (or 1/8).
Deduction	Reasoning. Geometry: properties of shapes.	5	Mathematical reasoning where the conclusion follows necessarily from a set of premises. If the premises are true then following deductive rules, the conclusion must also be true.	If 2x = 6, we can **deduce** that x = 3.
Degree	Geometry: properties of shapes.	5	The most common unit of measurement for angle.	A complete turn is 360 **degrees** (360º).
Diagonal (of a polygon)	Geometry: properties of shapes.	5	A line segment joining any two non-adjacent vertices of a polygon.	
Diameter	Geometry: properties of shapes.	6	Any of the chords of a circle or sphere that pass through the centre.	

Word	Domain	Year	Meaning	Example
Equation	Algebra.	6	A mathematical statement showing that two expressions are equal. The expressions are linked with the symbol '='.	7 – 2 = 4 + 1 5x = 15
Equivalence statement (or expression)	Addition and subtraction. Multiplication and division.	5	A numerical or algebraic expression which is the same as the original expression but is in a different form which might be more useful as a starting point to solve a particular problem.	19 x 8 = (20 x 8) – (1 x 8)
Formula (e)	Algebra.	6	An equation linking sets of physical variables.	To find the area of a circle, A, we use the **formula**: $A = \pi r^2$ Where *r* is the radius of the circle.
Four quadrants	Geometry: position and direction.	6	The four regions into which a plane is divided by the 'x' and 'y' axes in a (Cartesian) coordinate system.	
Gallon	Measurement.	6	An imperial measure of capacity equal to the volume occupied by ten pounds of distilled water. 1 gallon = 4 quarts = 8 pints ≈ 4.5 litres.	The bucket held two **gallons** of water.
Generalisation	Algebra.	6	To formulate a general statement or rule that applies correctly to all relevant cases.	*"The sum of two odd whole numbers is always an even whole number"* is a **general** statement. It is always true.

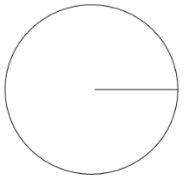
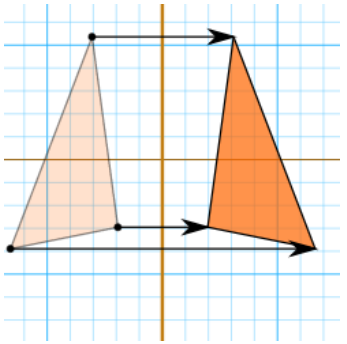
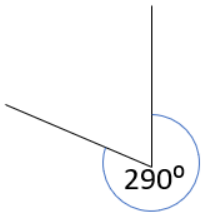
Word	Domain	Year	Meaning	Example
Hundred thousand	Number and place value.	5	The sixth column to the left in relation to the decimal point. It is one hundred thousands, or 10^5.	367, 500. This number reads as **three hundred** and sixty-seven **thousand** and five hundred.
Imperial units	Measurement.	5	Units of measurement historically used in the United Kingdom and other English-speaking countries.	Inch, foot, yard, mile, acre, ounce, pound, stone, hundredweight, ton, pint, quart, gallon are all **imperial units** of measure.
Improper fractions	Fractions, decimals, and percentages.	5	A fraction which has a numerator that is greater than its denominator, denoting a value greater than one.	$\frac{9}{4}$
Inch (in or ")	Measurement.	5	An imperial unit of length.	My thumbnail is approximately one **inch** wide.
Interval (across zero)	Number and place value.	6	The distance between a pair of numbers on a number line where one is positive and the other is negative.	
Level of accuracy	Number and place value. Addition and subtraction.	5	Often in reference to the number of significant figures (or rounding) with which a numerical quantity is recorded. The degree of precision in the measurement of a quantity.	3.7 + 4.9 ≈ 4 + 5 4 + 5 = 9 3.7 + 4.9 ≈ 9 to the nearest whole number.
Linear number sequence	Number and place value. Algebra.	6	A sequence of numbers that has a common difference (+/-).	3, 7, 11, 15, ….is a **linear number sequence** with a common difference of 4.
Line graph	Statistics.	5	**A graph in which points representing values of a**	

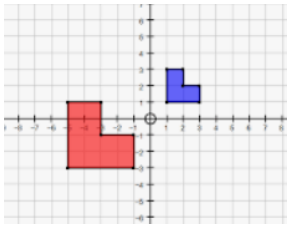
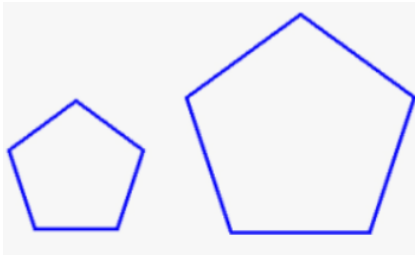
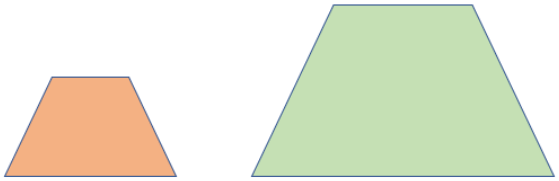
Word	Domain	Year	Meaning	Example
			variable for suitable values of an independent variable are connected by a straight line.	
Long division	Multiplication and division.	6	A columnar algorithm for division by more than a single digit.	432 ÷ 15 becomes 28·8 15 ⟌ 432·0 30 ↓ 132 120 ↓ 120 120 0 Answer: 28·8
Long multiplication	Multiplication and division.	5	A columnar algorithm for multiplication by more than a single digit.	124 × 26 becomes 1 2 124 × 26 744 2480 3224 1 1 Answer: 3224
Mean (average)	Statistics.	6	Sometimes called the arithmetic mean. The mean of a set of discrete data is the sum of the quantities divided by the number of quantities (or data points).	The **mean** average of 5, 6, 14, 15 and 45 is (5 + 6 + 14 + 15 + 45) ÷ 5 = 17 17 is the arithmetic **mean**.

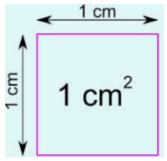
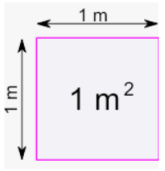
Word	Domain	Year	Meaning	Example
Mile	Measurement.	6	An imperial unit of length.	I live two **miles** away from my friend.
Million	Number and place value.	5	The seventh column to the left in relation to the decimal point. It is one thousand thousands or 10^6.	1, 367, 500 This number reads as **one million**, three hundred and sixty-seven thousand and five hundred.
Mixed numbers	Fractions, decimals, and percentages.	5	A whole number and a fractional part expressed as a common fraction.	$4\frac{5}{8}$ = four and five eighths.
Mixed operation	Addition, subtraction, multiplication, and division.	6	A calculation, or number sentence, involving more than one different operation.	3 + 7 x 8 = 59 is a calculation involving **mixed operations** (addition and multiplication on this occasion).
Multi-digit number	Number and place value.	6	A number comprising at least two digits.	8974 is a **multi-digit** number.
Net (of a shape)	Geometry: properties of shapes.	6	A plane figure composed of polygons which by folding and joining can form a polyhedron.	 A net of a cube
Order of magnitude	Number and place value.	6	The approximate size of a number, often given as power of ten.	2.97 x 1042 ≈ 3 x 1000 ≈ 3 x 10^3 The **magnitude** of this product is thousands.

Word	Domain	Year	Meaning	Example
Order of operations (BODMAS)	Addition, subtraction, multiplication, and division.	6	This refers to the order in which different mathematical operations are applied in a calculation. This is also known as BODMAS or BIDMAS, which stands for Brackets; Orders/Indices (powers); Division and Multiplication; Addition and Subtraction.	2 + 3 x 4 = 2 + 12 (multiplication before addition) 2 + 12 = 14
Per cent %	Fractions, decimals, and percentages.	5	Out of 100.	From 100 counters, I choose 35. This is 35% of the whole.
Percentage	Fractions, decimals, and percentages.	5	A fraction expressed as the number of parts per hundred and recorded using the notation %. The whole can be expressed as 100%.	35% = $\frac{35}{100}$ = 35 out of 100.
Pie chart	Statistics.	6	A form of presentation of statistical information. Within a circle, sectors like *slices of a pie* represent the quantities involved. The frequency of each quantity is proportional to the angle at the centre of the circle.	
Pint	Measurement.	5	An imperial measure of volume.	He drank a **pint** of lemonade. (1 pint is just over 0.5 litre)
Pound (lb)	Measurement.	5	An imperial measure of mass.	She bought two pounds of potatoes. (1lb is approximately 455 grams)

Word	Domain	Year	Meaning	Example
Powers of 10	Number and place value.	5	A way of recording multiplying by ten.	10^2 = 10 x 10 = 100 10^2 = **ten to the power** of 2
Prime factor	Multiplication and division.	5	The factors of a number that are prime.	2 and 3 are the **prime factors** of 12 since 12 = 2 x 2 x 3
Prime number	Multiplication and division.	5	A whole number greater than 1 that has exactly two factors, itself and 1.	2 is a prime number (factors 2, 1). 41 is a prime number (factors 41, 1). 97 is a prime number (factors 97, 1).
Proper fraction	Fractions, decimals, and percentages.	5	A fraction which has a numerator that is smaller than its denominator, denoting a value less than one.	$\frac{3}{4}$
Proportional graph	Measurement.	6	A linear graph that converts one measure to another.	
Proportionality	Ratio and proportion.	6	A part to whole comparison.	If £20 is shared in the ratio 3:5, the first person receives 3/8 of the whole. 3/8 is the **proportion**.
Quotient	Multiplication and division.	6	The result of a division.	45 ÷ 3 = 15 15 is the **quotient**.

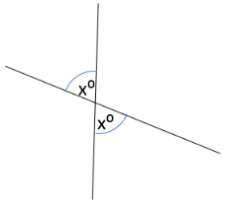
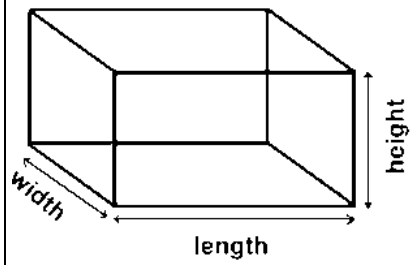
Word	Domain	Year	Meaning	Example
Radius	Geometry: properties of shapes.	6	In relation to a circle, the distance from the centre to any point on the circumference. For a sphere, the distance from the centre to any point on the sphere.	
Ratio (a:b notation)	Ratio and proportion.	6	A part-to-part comparison.	£20 is divided up in the **ratio** 3:2. For every £3 one person gets, the other person gets £2.
Recurring decimal	Fractions, decimals and percentages.	6	A decimal fraction with an infinitely repeating digit or group of digits.	1/3 = 0.333333333……
Reflection	Geometry: properties of shapes.	6	In 2-D, a transformation of the whole plane involving a mirror line or axis of symmetry in the plane. A 2-D reflection is specified by its mirror line.	
Reflex angle	Geometry: properties of shapes.	5	An angle that is greater than 180º but less than 360º.	

Word	Domain	Year	Meaning	Example
Relative size	Ratio and proportion.	6	A comparison of the size of number or shape.	10 is twice 5. 5 is half 10.
Remainder	Multiplication and division.	5	In the context of division where the answer (quotient) is not a whole number, the amount remaining after the operation.	36 ÷ 5 = 7 r 1 The **remainder** is 1.
Scale drawing	Measurement.	5	An accurate drawing of a physical object in which all lengths in the drawing are in the same ratio to the corresponding lengths in the actual object.	
Scale factor	Ratio and proportion.	6	For two similar geometric figures, the ratio of the corresponding edge lengths.	Enlargement **scale factor** 2. Each corresponding edge in the larger pentagon is twice the length of the smaller pentagon. 
Similar shape	Ratio and proportion.	6	Two shapes that have the same corresponding internal angles and sides or edges that are in proportion. One shape will be an *enlargement* of the other.	

Word	Domain	Year	Meaning	Example
Simple interest (simple rates)	Ratio and proportion.	6	In savings (or loans), banks apply an interest rate on the sum invested (or loaned). Simple interest is what is added to the savings (or loan) at the end of the specified period.	A saver invests £200 at a **simple rate** of 1% per year for one year. At the end of the year, the saver has 101% of £200, which is £202.
Square centimetre (cm^2)	Measurement.	5	A unit of area, a square measuring 1cm by 1cm.	
Square metre (m^2)	Measurement.	5	A unit of area, a square measuring 1m by 1m.	
Square number	Multiplication and division.	5	A number that can be expressed as the product of two equal numbers.	36 = 6 x 6 36 = 6^2 36 is six squared. 36 is a **square number**.
Ten million	Number and place value.	6	The eighth column to the left relative to the decimal point. It is ten thousand thousands or 10^7.	10, 500, 003 This number reads **ten million**, five hundred thousand and three.
Ten thousand	Number and place value.	5	The fifth column to the left relative to the decimal point. It is ten thousands or 10^4.	20, 503 This number reads **twenty thousand**, five hundred and three (2 lots of ten thousand).

Word	Domain	Year	Meaning	Example
Term-to-term rule	Algebra.	6	An algebraic rule to generate successive terms of a sequence.	3, 7, 11, 15, …. The **term-to-term rule** is *add 4*.
Terminating decimal	Fractions, decimals, and percentages.	6	**A decimal fraction which can be expressed in a finite number of figures.**	$\frac{4}{5}$ = 0.8 (this number **terminates** at the first decimal place).
Thousandths	Fractions, decimals, and percentages.	5	The result of dividing by 1000. The third column to the left after the decimal point.	3.658 The eight is in the **thousandths** column.
Timetable	Statistics.	6	A table of information showing when things will happen.	This **timetable** shows when the trains arrive at each station. 
Unequal sharing	Ratio and proportion.	6	The sharing of a quantity into parts that are not equal.	£20 is divided up in the ratio 3:2. For every £3 one person gets, the other person gets £2. This is **unequal sharing**.
Unknown	Algebra.	6	In the context of calculation, the part that is to be worked out using the other known or given elements.	a + 4 = 10 a is **unknown**.

STATIONS	TRAIN 1	TRAIN 2	TRAIN 3	TRAIN 4	TRAIN 5
CHURCH STREET	08:04	08:19	08:34	08:49	09:04
SANDYCOMBE CIRCLE	09:08	09:23	09:38	09:53	10:08
HENLEY HOSPITAL	10:05	10:20	10:35	10:50	11:05
HILLSIDE MALL	11:07	11:22	11:37	11:52	12:07
DULWICH PARK	12:04	12:19	12:34	12:49	13:04
GRAND CENTRAL	13:08	13:23	13:38	13:53	14:08
STATION PARADE	14:05	14:20	14:35	14:50	15:05
GOLDSTEAD	15:07	15:22	15:37	15:52	16:07
MONUMENT DISTRICT	16:05	16:20	16:35	16:50	17:05
LORDSHIP SQUARE	17:07	17:22	17:37	17:52	18:07

Word	Domain	Year	Meaning	Example
Variable	Algebra.	6	A quantity that can take on a range of values, often denoted by a symbol or letter.	If x = 3, then x + 2 = 5 If x = 4, then x + 2 = 6 x is the **variable**.
Vertically opposite (angles)	Geometry: properties of shapes.	6	The pair of equal angles between two intersecting lines. There are always two such pairs.	
Volume	Measurement.	5	A measure of 3-D space, usually measured in cubic units such as cubic centimetres (cm^3).	

Glossary index

Word	Domain	Section
Analogue clock	Measurement	Lower Key Stage 2
Angle	Geometry: properties of shapes	Lower Key Stage 2
Angles at a point (on a straight line)	Geometry: properties of shapes	Upper Key Stage 2
Angles at a point (on a whole turn)	Geometry: properties of shapes	Upper Key Stage 2
Anti-clockwise	Geometry: position and direction	Key Stage 1
Area	Measurement	Lower Key Stage 2
Around	Geometry: position and direction	Key Stage 1
Array	Multiplication and division	Key Stage 1
Associative	Addition and subtraction	Key Stage 1
Associative	Multiplication and division	Lower Key Stage 2
Axis (-es)	Geometry: position and direction	Lower Key Stage 2
Backwards	Addition and subtraction	Key Stage 1
Bar chart	Statistics	Lower Key Stage 2
Before	Measurement	Key Stage 1
Between	Geometry: position and direction	Key Stage 1
Block diagram	Statistics	Key Stage 1
Brackets	Addition, subtraction, multiplication, and division	Upper Key Stage 2
Calculate	Multiplication and division	Key Stage 1

Word	Domain	Section
Capacity	Measurement	Key Stage 1
Carroll diagram	Geometry: properties of shapes	Lower Key Stage 2
Categorical data	Statistics	Key Stage 1
Category	Statistics	Key Stage 1
Centigrade (ºc)	Measurement	Key Stage 1
Centimetre (cm)	Measurement	Key Stage 1
Change	Measurement	Key Stage 1
Chronological	Measurement	Key Stage 1
Circle	Geometry: properties of shapes	Key Stage 1
Circumference	Geometry: properties of shapes	Upper Key Stage 2
Classify	Geometry: properties of shapes	Lower Key Stage 2
Clock face	Measurement	Key Stage 1
Clockwise	Geometry: position and direction	Key Stage 1
Close	Geometry: position and direction	Key Stage 1
Coin	Measurement	Key Stage 1
Collate	Statistics	Key Stage 1
Column	Addition and subtraction	Key Stage 1
Columnar (addition)	Addition and subtraction	Lower Key Stage 2

Word	Domain	Section
Columnar (subtraction)	Addition and subtraction	Lower Key Stage 2
Combination	Measurement	Key Stage 1
Combine	Addition and subtraction	Key Stage 1
Common factor	Addition, subtraction, multiplication, and division	Upper Key Stage 2
Common multiple	Addition, subtraction, multiplication, and division	Upper Key Stage 2
Commutative	Addition and subtraction	Key Stage 1
Compare	Number and place value	Key Stage 1
Complement (of a number)	Fractions, decimals, and percentages	Upper Key Stage 2
Complete turn	Geometry: properties of shapes	Lower Key Stage 2
Composite number	Multiplication and division	Upper Key Stage 2
Composite shape	Measurement	Upper Key Stage 2
Compound unit (speed)	Measurement	Upper Key Stage 2
Cone	Geometry: properties of shapes	Key Stage 1
Conjecture	Fractions, decimals, and percentages	Upper Key Stage 2
Container	Measurement	Key Stage 1
Continuous (quantities)	Fractions	Key Stage 1
Continuous data	Statistics	Lower Key Stage 2
Coordinate	Geometry: position and direction	Lower Key Stage 2

Word	Domain	Section
Coordinate plane	Geometry: position and direction	Upper Key Stage 2
Correspondence (problems)	Multiplication and division	Lower Key Stage 2
Count	Number and place value	Key Stage 1
Cube	Geometry: properties of shapes	Key Stage 1
Cube number	Multiplication and division	Upper Key Stage 2
Cubic centimetre	Measurement	Upper Key Stage 2
Cubic metre	Measurement	Upper Key Stage 2
Cuboid	Geometry: properties of shapes	Key Stage 1
Cylinder	Geometry: properties of shapes	Key Stage 1
Date	Measurement	Key Stage 1
Decimal (mm and cm)	Geometry: properties of shapes	Lower Key Stage 2
Decimal fraction	Fractions, decimals, and percentages	Upper Key Stage 2
Decimal notation	Fractions and decimals	Lower Key Stage 2
Decimal place	Fractions and decimals	Lower Key Stage 2
Deduction	Geometry: properties of shapes	Upper Key Stage 2
Degree	Geometry: properties of shapes	Upper Key Stage 2
Denomination	Measurement	Key Stage 1
Denominator	Fractions	Lower Key Stage 2

Word	Domain	Section
Derive	Addition and subtraction	Key Stage 1
Diagonal (of a polygon)	Geometry: properties of shapes	Upper Key Stage 2
Diameter	Geometry: properties of shapes	Upper Key Stage 2
Difference	Addition and subtraction	Key Stage 1
Difference between	Addition and subtraction	Key Stage 1
Digit (value)	Number and place value	Key Stage 1
Digital (clock)	Measurement	Lower Key Stage 2
Digital clock	Measurement	Lower Key Stage 2
Dimension	Measurement	Lower Key Stage 2
Direction	Geometry: position and direction	Key Stage 1
Discrete (quantities)	Fractions	Key Stage 1
Discrete data	Statistics	Lower Key Stage 2
Dissect	Geometry: properties of shapes	Lower Key Stage 2
Distance between	Addition and subtraction	Key Stage 1
Distributive law	Multiplication and division	Lower Key Stage 2
Dividend	Multiplication and division	Key Stage 1
Division	Multiplication and division	Key Stage 1
Division sign ÷	Multiplication and division	Key Stage 1

Word	Domain	Section
Doubling	Multiplication and division	Key Stage 1
Down	Geometry: position and direction	Key Stage 1
Edge (of a 3-d shape)	Geometry: properties of shapes	Key Stage 1
Enumerate	Number and place value	Key Stage 1
Equal (to)	Number and place value	Key Stage 1
Equal parts	Fractions	Key Stage 1
Equation	Algebra	Upper Key Stage 2
Equilateral	Geometry: properties of shapes	Lower Key Stage 2
Equivalence statement	Multiplication and division	Upper Key Stage 2
Equivalent (fraction)	Fractions	Key Stage 1
Equivalent fraction	Fractions and decimals	Lower Key Stage 2
Estimate	Number and place value	Key Stage 1
Even	Number and place value	Key Stage 1
Evening	Measurement	Key Stage 1
Event	Measurement	Key Stage 1
Expression	Multiplication and division	Lower Key Stage 2
Face (of a 3-d shape)	Geometry: properties of shapes	Key Stage 1
Factor (pairs)	Multiplication and division	Lower Key Stage 2

Word	Domain	Section
Far	Geometry: position and direction	Key Stage 1
Fewer	Number and place value	Key Stage 1
First	Measurement	Key Stage 1
Fluency	Number and place value	Key Stage 1
Formula (e)	Algebra	Upper Key Stage 2
Forwards	Addition and subtraction	Key Stage 1
Four quadrants	Geometry: position and direction	Upper Key Stage 2
Four-digit (number)	Addition and subtraction	Lower Key Stage 2
Fraction	Multiplication and division	Key Stage 1
Gallon	Measurement	Upper Key Stage 2
Generalisation	Algebra	Upper Key Stage 2
Geometric shapes	Geometry: properties of shapes	Lower Key Stage 2
Gram (g)	Measurement	Key Stage 1
Greater than >	Number and place value	Key Stage 1
Grouping	Multiplication and division	Key Stage 1
Half	Fractions	Key Stage 1
Half (past)	Measurement	Key Stage 1
Half (turn)	Geometry: position and direction	Key Stage 1

Word	Domain	Section
Half-turn	Geometry: properties of shapes	Lower Key Stage 2
Hands (on a clock)	Measurement	Key Stage 1
Heavier (than)	Measurement	Key Stage 1
Heavy	Measurement	Key Stage 1
Height	Measurement	Key Stage 1
Horizontal (line)	Geometry: properties of shapes	Lower Key Stage 2
Hours	Measurement	Key Stage 1
Hundred thousand	Number and place value	Upper Key Stage 2
Hundreds	Addition and subtraction	Lower Key Stage 2
Hundredth	Fractions and decimals	Lower Key Stage 2
Imperial units	Measurement	Upper Key Stage 2
Improper fractions	Fractions, decimals, and percentages	Upper Key Stage 2
In front of	Geometry: position and direction	Key Stage 1
Inch	Measurement	Upper Key Stage 2
Increase	Addition and subtraction	Key Stage 1
Infinite	Number and place value	Key Stage 1
Inside	Geometry: position and direction	Key Stage 1
Integer	Multiplication and division	Lower Key Stage 2

Word	Domain	Section
Interpret	Addition and subtraction	Key Stage 1
Interpret	Statistics	Key Stage 1
Interval (across zero)	Number and place value	Upper Key Stage 2
Interval (time)	Measurement	Key Stage 1
Inverse	Addition and subtraction	Key Stage 1
Inverse operation	Addition and subtraction	Lower Key Stage 2
Irregular	Geometry: properties of shapes	Lower Key Stage 2
Isosceles	Geometry: properties of shapes	Lower Key Stage 2
Kilogram (kg)	Measurement	Key Stage 1
Kilometre (km)	Measurement	Lower Key Stage 2
Kite	Geometry: properties of shapes	Lower Key Stage 2
Leap year	Measurement	Lower Key Stage 2
Least	Number and place value	Key Stage 1
Left	Geometry: position and direction	Key Stage 1
Length	Measurement	Key Stage 1
Less (than)	Number and place value	Key Stage 1
Less than <	Number and place value	Key Stage 1
Level of accuracy	Addition and subtraction	Upper Key Stage 2

Word	Domain	Section
Light	Measurement	Key Stage 1
Lighter (than)	Measurement	Key Stage 1
Line graph	Statistics	Upper Key Stage 2
Line of symmetry	Geometry: properties of shapes	Lower Key Stage 2
Linear number sequence	Number and place value	Upper Key Stage 2
Litre (l)	Measurement	Key Stage 1
Long (-er)	Measurement	Key Stage 1
Long division	Addition, subtraction, multiplication, and division	Upper Key Stage 2
Long multiplication	Multiplication and division	Upper Key Stage 2
Many-to-one correspondence	Statistics	Key Stage 1
Mass	Measurement	Key Stage 1
Mean (average)	Statistics	Upper Key Stage 2
Measure	Fractions	Key Stage 1
Mental (method)	Addition and subtraction	Key Stage 1
Metre (m)	Measurement	Key Stage 1
Metric measures	Measurement	Lower Key Stage 2
Middle	Geometry: position and direction	Key Stage 1
Midnight	Measurement	Lower Key Stage 2

Word	Domain	Section
Mile	Measurement	Upper Key Stage 2
Millilitre (ml)	Measurement	Key Stage 1
Millimetres (mm)	Measurement	Lower Key Stage 2
Million	Number and place value	Upper Key Stage 2
Minuend	Addition and subtraction	Key Stage 1
Minus	Addition and subtraction	Key Stage 1
Minute	Measurement	Key Stage 1
Missing (number problems)	Addition and subtraction	Key Stage 1
Mixed numbers	Fractions, decimals, and percentages	Upper Key Stage 2
Mixed operations	Addition, subtraction, multiplication, and division	Upper Key Stage 2
Month	Measurement	Key Stage 1
More (than)	Number and place value	Key Stage 1
Morning	Measurement	Key Stage 1
Most	Number and place value	Key Stage 1
Motion	Geometry: position and direction	Key Stage 1
Movement	Geometry: position and direction	Key Stage 1
Multi-digit number	Addition, subtraction, multiplication, and division	Upper Key Stage 2
Multiple	Number and place value	Key Stage 1

Word	Domain	Section
Multiplication (tables)	Multiplication and division	Key Stage 1
Near	Geometry: position and direction	Key Stage 1
Negative (number)	Number and place value	Lower Key Stage 2
Net (of a shape)	Geometry: properties of shapes	Upper Key Stage 2
Next	Measurement	Key Stage 1
Non-standard units	Measurement	Key Stage 1
Non-symmetrical (shape)	Geometry: properties of shapes	Lower Key Stage 2
Non-unit (fraction)	Fractions	Key Stage 1
Note	Measurement	Key Stage 1
Number	Number and place value	Key Stage 1
Number bonds	Addition and subtraction	Key Stage 1
Number-line	Number and place value	Key Stage 1
Number-track	Number and place value	Key Stage 1
Numeral	Number and place value	Key Stage 1
Numerator	Fractions	Lower Key Stage 2
Object	Number and place value	Key Stage 1
Obtuse	Geometry: properties of shapes	Lower Key Stage 2
O'clock	Measurement	Key Stage 1

Word	Domain	Section
Odd	Number and place value	Key Stage 1
One less	Number and place value	Key Stage 1
One more	Number and place value	Key Stage 1
One third	Fractions	Key Stage 1
One-digit	Addition and subtraction	Key Stage 1
Ones	Addition and subtraction	Key Stage 1
Operation	Addition and subtraction	Key Stage 1
Operator (fractions of)	Fractions	Lower Key Stage 2
Order	Number and place value	Key Stage 1
Order of magnitude	Fractions, decimals, and percentages	Upper Key Stage 2
Order of operations (BODMAS)	Addition, subtraction, multiplication, and division	Upper Key Stage 2
Ordinal numbers	Number and place value	Key Stage 1
Orientation (direction)	Geometry: position and direction	Key Stage 1
Orientation (of a shape)	Geometry: properties of shapes	Key Stage 1
Outside	Geometry: position and direction	Key Stage 1
Parallel	Geometry: properties of shapes	Lower Key Stage 2
Parallelogram	Geometry: properties of shapes	Lower Key Stage 2
Partition	Number and place value	Key Stage 1

Word	Domain	Section
Partitioning	Number and place value	Lower Key Stage 2
Pattern	Number and place value	Key Stage 1
Pence(p)	Measurement	Key Stage 1
Per cent %	Fractions, decimals, and percentages	Upper Key Stage 2
Percentage	Fractions, decimals, and percentages	Upper Key Stage 2
Perimeter	Measurement	Lower Key Stage 2
Perpendicular	Geometry: properties of shapes	Lower Key Stage 2
Pictogram	Statistics	Key Stage 1
Pictorial	Number and place value	Key Stage 1
Pie chart	Statistics	Upper Key Stage 2
Pint	Measurement	Upper Key Stage 2
Place holder (zero)	Number and place value	Key Stage 1
Place value	Number and place value	Key Stage 1
Plot	Geometry: position and direction	Lower Key Stage 2
Plus	Addition and subtraction	Key Stage 1
Pm	Measurement	Lower Key Stage 2
Point	Geometry: position and direction	Lower Key Stage 2
Polygon	Geometry: properties of shapes	Key Stage 1

Word	Domain	Section
Polyhedron (-a)	Geometry: properties of shapes	Lower Key Stage 2
Position	Geometry: position and direction	Key Stage 1
Positive (number)	Number and place value	Lower Key Stage 2
Pound (£)	Measurement	Key Stage 1
Pound (lb)	Measurement	Upper Key Stage 2
Powers of 10	Number and place value	Upper Key Stage 2
Prime factor	Multiplication and division	Upper Key Stage 2
Prime number	Multiplication and division	Upper Key Stage 2
Prism	Geometry: properties of shapes	Key Stage 1
Programme (robot)	Geometry: position and direction	Key Stage 1
Proper (fraction)	Fractions, decimals, and percentages	Upper Key Stage 2
Proportion	Fractions and decimals	Lower Key Stage 2
Proportional graph	Measurement	Upper Key Stage 2
Proportionality	Ratio and proportion	Upper Key Stage 2
Protractor	Geometry: properties of shapes	Lower Key Stage 2
Put together	Addition and subtraction	Key Stage 1
Pyramid	Geometry: properties of shapes	Key Stage 1
Quadrant (first)	Geometry: position and direction	Lower Key Stage 2

Word	Domain	Section
Quadrilateral	Geometry: properties of shapes	Key Stage 1
Quantity	Number and place value	Key Stage 1
Quarter	Fractions	Key Stage 1
Quarter (past)	Measurement	Key Stage 1
Quarter (to)	Measurement	Key Stage 1
Quarter (turn)	Geometry: position and direction	Key Stage 1
Quotient	Multiplication and division	Upper Key Stage 2
Radius	Geometry: properties of shapes	Upper Key Stage 2
Ratio (a:b notation)	Ratio and proportion	Upper Key Stage 2
Ratio (for every)	Statistics	Key Stage 1
Reason	Number and place value	Key Stage 1
Recall	Addition and subtraction	Key Stage 1
Record	Measurement	Key Stage 1
Rectangle	Geometry: properties of shapes	Key Stage 1
Rectilinear	Measurement	Lower Key Stage 2
Recurring decimal	Fractions, decimals, and percentages	Upper Key Stage 2
Reflection	Geometry: properties of shapes	Upper Key Stage 2
Reflex angle	Geometry: properties of shapes	Upper Key Stage 2

Word	Domain	Section
Regular	Geometry: properties of shapes	Lower Key Stage 2
Related fact	Addition and subtraction	Key Stage 1
Relative size	Ratio and proportion	Upper Key Stage 2
Remainder	Multiplication and division	Upper Key Stage 2
Repeated (addition)	Multiplication and division	Key Stage 1
Rhombus	Geometry: properties of shapes	Lower Key Stage 2
Right	Geometry: position and direction	Key Stage 1
Right-angle	Geometry: position and direction	Key Stage 1
Roman numeral	Measurement	Lower Key Stage 2
Rotation	Geometry: position and direction	Key Stage 1
Round (number)	Number and place value	Lower Key Stage 2
Ruler	Measurement	Key Stage 1
Scale drawing	Measurement	Upper Key Stage 2
Scale factor	Ratio and proportion	Upper Key Stage 2
Scaled bar chart	Statistics	Lower Key Stage 2
Scalene	Geometry: properties of shapes	Lower Key Stage 2
Scales (weighing)	Measurement	Key Stage 1
Scaling (scale drawing)	Multiplication and division	Lower Key Stage 2

Word	Domain	Section
Seconds	Measurement	Key Stage 1
Sequence	Measurement	Key Stage 1
Sharing	Multiplication and division	Key Stage 1
Short (-er)	Measurement	Key Stage 1
Short division	Multiplication and division	Lower Key Stage 2
Short multiplication	Multiplication and division	Lower Key Stage 2
Side (of a 2-d shape)	Geometry: properties of shapes	Key Stage 1
Similar (shape)	Geometry: properties of shapes	Key Stage 1
Similar shape	Ratio and proportion	Upper Key Stage 2
Simple rates	Multiplication and division	Upper Key Stage 2
Simplify	Fractions and decimals	Lower Key Stage 2
Size	Geometry: properties of shapes	Key Stage 1
Solution	Number and place value	Key Stage 1
Sphere	Geometry: properties of shapes	Key Stage 1
Square	Geometry: properties of shapes	Key Stage 1
Square centimetre (cm2)	Measurement	Upper Key Stage 2
Square metre (m2)	Measurement	Upper Key Stage 2
Square number	Multiplication and division	Upper Key Stage 2

Word	Domain	Section
Standard units	Measurement	Key Stage 1
Statements	Addition and subtraction	Key Stage 1
Subtraction	Addition and subtraction	Key Stage 1
Subtrahend	Addition and subtraction	Key Stage 1
Sum	Addition and subtraction	Key Stage 1
Symmetrical (shape)	Geometry: properties of shapes	Lower Key Stage 2
Symmetry (line)	Geometry: properties of shapes	Key Stage 1
Table (statistics)	Statistics	Key Stage 1
Tables (multiplication)	Multiplication and division	Key Stage 1
Take away	Addition and subtraction	Key Stage 1
Tall (-er)	Measurement	Key Stage 1
Tally chart	Statistics	Key Stage 1
Temperature (ºc)	Measurement	Key Stage 1
Ten million	Number and place value	Upper Key Stage 2
Ten thousand	Number and place value	Upper Key Stage 2
Tens	Addition and subtraction	Key Stage 1
Tenth	Fractions	Lower Key Stage 2
Terminating decimal	Fractions, decimals, and percentages	Upper Key Stage 2

Word	Domain	Section
Term-to-term rule	Number and place value	Upper Key Stage 2
Thermometer	Measurement	Key Stage 1
Thousands	Number and place value	Lower Key Stage 2
Thousandths	Fractions, decimals, and percentages	Upper Key Stage 2
Three-digit (number)	Number and place value	Lower Key Stage 2
Three-quarter (turn)	Geometry: position and direction	Key Stage 1
Three-quarters	Fractions	Key Stage 1
Three-quarter-turn	Geometry: properties of shapes	Lower Key Stage 2
Time	Measurement	Key Stage 1
Time graphs	Statistics	Lower Key Stage 2
Timetable	Statistics	Upper Key Stage 2
Today	Measurement	Key Stage 1
Tomorrow	Measurement	Key Stage 1
Top	Geometry: position and direction	Key Stage 1
Total	Addition and subtraction	Key Stage 1
Translation	Geometry: position and direction	Lower Key Stage 2
Trapezium	Geometry: properties of shapes	Lower Key Stage 2
Triangle	Geometry: properties of shapes	Key Stage 1

Word	Domain	Section
Two-digit (number)	Addition and subtraction	Key Stage 1
Unequal sharing	Ratio and proportion	Upper Key Stage 2
Unit fraction	Fractions and decimals	Lower Key Stage 2
Unknown	Algebra	Upper Key Stage 2
Up	Geometry: position and direction	Key Stage 1
Variable	Algebra	Upper Key Stage 2
Vertex (vertices)	Geometry: properties of shapes	Key Stage 1
Vertical	Geometry: properties of shapes	Key Stage 1
Vertical (line)	Geometry: properties of shapes	Lower Key Stage 2
Vertically opposite (angles)	Geometry: properties of shapes	Upper Key Stage 2
Volume	Measurement	Key Stage 1
Volume	Measurement	Upper Key Stage 2
Week	Measurement	Key Stage 1
Weight	Measurement	Key Stage 1
Whole	Fractions	Key Stage 1
Whole number	Fractions and decimals	Lower Key Stage 2
Whole(turn)	Geometry: position and direction	Key Stage 1
Written (method)	Addition and subtraction	Key Stage 1

Word	Domain	Section
Year	Measurement	Key Stage 1
Yesterday	Measurement	Key Stage 1
Zero	Addition and subtraction	Key Stage 1

Word cards

Introduction

How do we learn to communicate in the language of mathematics?

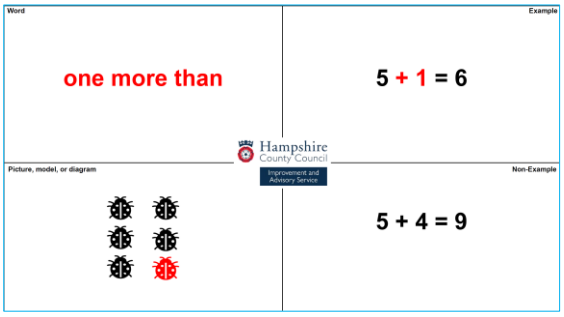
Sometimes the vocabulary is specific to the subject and not found elsewhere. Words such as geometry, square root and algebra may fall into this category. Sometimes the vocabulary has a different (or parallel) meaning in mathematics compared to everyday usage. Words such as product, square, average, sum, coordinate are examples of this.

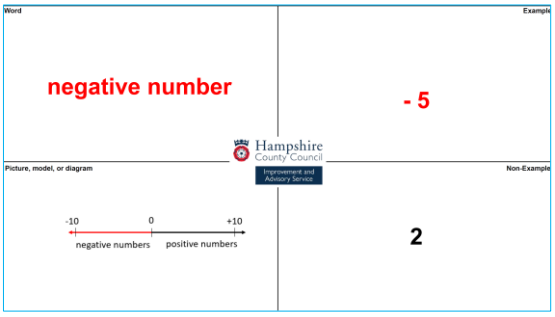
Effective communication in mathematics can be likened to learning a foreign language. We need to be precise when we speak ‘mathematics’ and we need to interpret the meaning of the words in the context of the subject and of the problem.

This resource is designed to provide a flexible way of developing the use of accurate and precise mathematical vocabulary in the classroom. The HIAS Mathematics Team Glossary is intended to support teachers with ideas for definitions and examples for mathematical words and provides a reference point when creating cards that are bespoke to learners or particular topic areas.

The word cards are divided into four sections:

- the mathematical word
- an example of what the word is
- an example of what the word is **not**
- a model or image to represent the word visually or diagrammatically.





The word cards are linked to the units of work in the HIAS scheme of learning for mathematics for Year 1 to Year 9, which is available to subscribing schools.

https://maths.hias.hants.gov.uk/

How can we support learners so that they use precise mathematical language correctly and accurately?

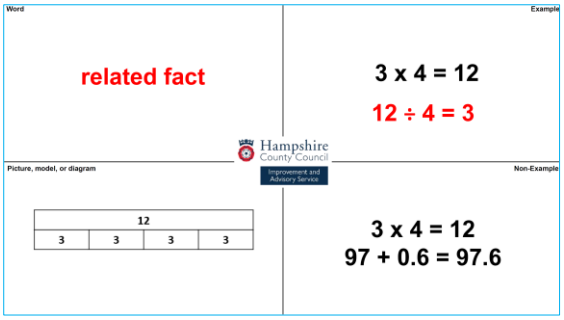
Consider the word *sum*. In everyday speak, we sometimes talk about *doing a sum*, to mean any calculation. We also use it in phrases such as *the sum of all fears* to mean your worst nightmares all in one place and to talk about an amount of money such as *that is a large sum of money*. In mathematics, the definition is the same, but we are more precise in our usage. The sum is the total amount resulting from the addition of two or more numbers, items, or quantities.

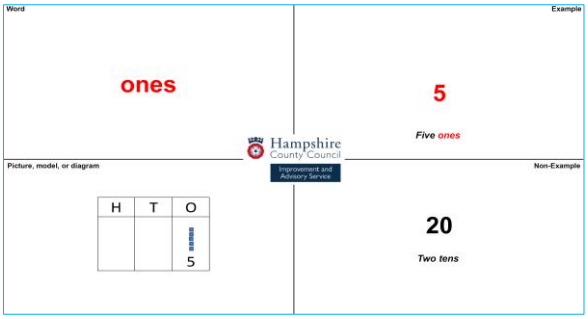
Equally, we can consider the word *difference*. In everyday speak, we use it to compare how people or things are dissimilar.

We also use it in phrases that describe impact such as *this action will make a difference to the outcome* and to describe an argument as in *Jack and Jill have had a difference of opinion*. In mathematics, the definition is the same, but we are more precise in our usage. The difference is the amount by which two quantities differ or the amount that is left after subtraction of one value from another.

To ensure that learners use precise mathematical language, they need opportunities to explore what it is and what it is not, they also need to represent the word or phrase in different ways to build meaning.

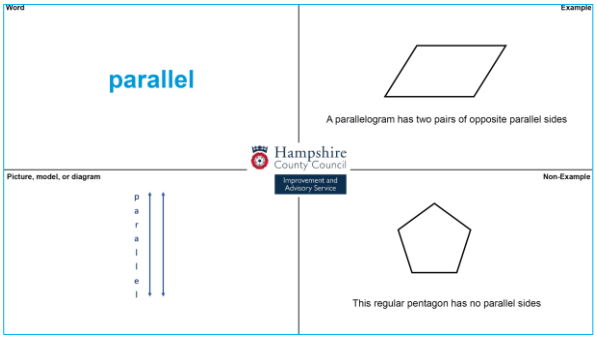
The cards can be used in a variety of ways. Teachers should utilise the resource in such a way that learners are able to collaborate and come to a common understanding as to the meaning and use of a particular mathematical word.





Ideas for how to use the cards with learners and with teachers

- Matching activities – cut the completed cards into four pieces, shuffle the card pieces, and ask learners to work collaboratively to put them back together again.
- Guess the word – complete three sections, leaving the *word* box blank. Ask learners to independently decide which word is being described and then compare with other learners' ideas. Agree which words are possible and which are not, with reasons.
- Fill in the blanks – complete one or more sections on a card, leaving at least one section blank. Ask learners to collaborate to complete the blank sections and then compare with other groups' interpretations of the information given. Learners should discuss, agree, and justify choices in pairs and in larger groups.
- Word banks – use a small bank of maths words, taken from the topic you are teaching. Ask pupils to fill in the boxes for the same word and compare. Agree which is mathematically correct, discuss and justify choices.
- Teacher continuing professional development (CPD) – use the glossary and ask colleagues to complete blank cards for a particular word. Agree as a staff what is appropriate for different ages and stages. Develop a common understanding of progression in the use of mathematical vocabulary and an appreciation of different meanings or interpretations of the same word, such as *sequence of events* and *a number sequence* as well as different words with similar meanings, such as *sum* and *total*.



Word card list

Key Stage 1

Domain	Year 1 and Year 2	
Number and place value	• one more than • one less than • number • tens	• ones • greater than • less than
Addition and subtraction	• number bond (to 10) • zero • add • subtract1	• part • whole • inverse
Multiplication and division	• array • double • groups of	• multiply • divide • equal groups
Fractions	• half • quarter • two-quarters	• three-quarters • one whole
Measurement	• longer • shorter • hour • pound	• pence • minute • temperature
Geometry: properties of shape	• rectangle • square • cube • pyramid	• 2-D shape • 3-D shape • triangle • cylinder
Geometry: position and direction	• whole turn • half turn	• pattern • quarter turn
Statistics	• tally chart • block diagram	

Lower Key Stage 2

Domain	Year 3 and Year 4	
Number and place value	• estimate • hundreds • multiple	• negative number • numeral • thousands
Addition and subtraction	• columnar method • difference • operation	• sum • total
Multiplication and division	• commutative • factor (pairs)	• multiplication table • related fact
Fractions (including decimals in Year 4)	• decimal place • denominator • equivalent	• hundredth • numerator • tenth
Measurement	• centimetre • change (money) • gram • kilogram	• kilometre • metre • millimetre • perimeter
Geometry: properties of shape	• angle • horizontal • parallel • perpendicular	• quadrilateral • symmetry • vertical
Geometry: position and direction	• coordinate • quadrant	• translation
Statistics	• bar chart • continuous data • discrete data	• pictogram • time graph

Upper Key Stage 2

Domain	Year 5 and Year 6	
Number and place value	• accuracy • hundred thousand • million	• ten million • ten thousand
Addition and subtraction Multiplication and division	• BODMAS • brackets • common factor • common multiple • cube number	• mixed operation • prime number • remainder • round (-ing) • square number
Fractions, decimals, and percentages	• decimal (fraction) • decimal (place) • hundredth • improper (fraction) • mixed number • per cent % (percentage)	• proper (fraction) • recurring decimal • simplify • terminating decimal • thousandth • unit fraction
Ratio and proportion (Year 6)	• ratio notation • scale (drawing) • unequal sharing	
Algebra (Year 6)	• equation • expression • formula (-e)	• linear sequence • variable
Measurement	• area • cubic centimetre • cubic metre • inch • litre • mile	• millilitre • pint • square centimetre • square metre • volume
Geometry: properties of shape	• acute • circumference • diameter • dimension • irregular (polygon) • net (of a shape)	• obtuse • polygon • radius • reflex • regular (polygon)
Geometry: position and direction	• axis (-es) • coordinate plane	• reflection (of a shape)
Statistics	• line graph • mean (average)	• pie chart • timetable

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