Maths Glossary

24-hour – Time recorded as 24 continuous hours, e.g. 1 p.m. = 13:00

3D – A shape with three dimensions: length, width and height.

a.m. – Any time after 12 midnight until 12 noon or midday.

Acute – Any angle less than 90°.

Addition – Finding the total of two or more numbers.

Adjacent – Adjacent lines are next to each other.

Algebra – Maths where numbers or values are represented by letters or symbols.

Analogue – 12-hour time written as a.m. (morning) or p.m. (afternoon) usually shown by a clock with hands.

Angle – The amount of turn between two straight lines that are joined at a point.

Angle on a straight line – Also called a straight angle. An angle on a straight line which = 180° e.g. 

Anti-clockwise – The opposite direction to which the hands move around a clock 

Approximately – An answer or equation that is not completely accurate but close enough to be useful. The symbol ≈ may be used to show this.

Area – The size that a surface takes up measured in 'square' **units of measurement**, e.g. square metres (m^2).

Axis – The horizontal (x-axis) or vertical (y-axis) lines used in plotting coordinates.

Capacity – The amount of liquid that a container can hold.

Carry – To move a digit to the next column in a calculation.

Circumference – The distance around a circle (**perimeter**).

Clockwise – The direction in which the hands move around a clock 

Column method – Writing numbers in columns according to their place value to make them easier to add, subtract, etc.

Common denominator – When working with fractions with different denominators, convert them to equivalent fractions with the same or common denominator. This number should be a multiple of both denominators.

Common factor – Numbers that are factors of more than one number, e.g. 5 is a common factor of 10 and 15.

Common multiple – Numbers that are multiples of more than one number, e.g. 12 is a multiple of 1, 2, 3, 4, 6 and 12.

Composite Shape – A shape made from other shapes joined together.

Coordinates – Pairs of numbers that show the exact position of a point on a grid. Normally within brackets and separated by a comma.

Cube number – The result of multiplying a number by itself and by itself again, e.g. $4^3 = 4 \times 4 \times 4 = 64$

Data – A collection of information which might be numbers, facts or measurements. Data is often organised into tables and displayed as charts or graphs to make it easier to understand.

Decimal fraction – Any fraction where the denominator is a power of 10, e.g. 10, 100 or 1,000. Writing them with a decimal point instead of a denominator makes it easier to complete operations. Often just called decimals.

Decimal place – Decides how accurate a decimal is. For example a decimal rounded to one decimal place will be rounded to the nearest tenth e.g. 3.78 → 3.8

Decimal point – Dot used to separate the decimal fraction from the whole part of a number.

Decreasing – Making an amount smaller.

Degrees – The units used to record angles, e.g. 90°.

Denominator – The number below the line in a fraction.

Diameter – The distance across a circle through the centre.

Digit – The individual figures that numbers are made from.

Digital – A clock that shows the hour followed by the number of minutes past the hour, usually separated by a colon.

Division – The **inverse** of multiplication. Either think of sharing an amount equally (e.g. 25 sweets shared between 5 friends equals 5 sweets each) or grouping objects (e.g. how many half-dozen egg boxes are needed to hold 36 eggs? 6 groups of 6 equal 36).

Divisor – The amount that you are dividing by. It might be a whole number, a fraction or a decimal.

Equation – An equation uses an equals sign to separate two expressions with the same value, e.g. $2X = 10$ or $5 \times 3 = 10 + 5$.

Equilateral – A triangle with three equal sides and three equal angles (all 60°).

Equivalent fraction – Fractions that equal each other, e.g. $\frac{2}{4} = \frac{1}{2}$

Estimating – Making a rough or approximate calculation to help you solve a problem.

Exchange – To change a number, e.g. change 40 into 30 and 10 to allow you to move it into another column to help in calculations.

Expression – Numbers, symbols and operation signs (×, ÷, + and –) grouped together to show the value of something, e.g. $2 + 3$ or $7Y + 3$.

Factor – A whole number that divides exactly into another whole number. For example, both 6 and 8 are factors of 48 because they divide into 48 without leaving a remainder.

Formula – Formulae are rules that show the relationship between different **variables** in maths and science. They are usually written as **equations**.

Fortnight – Two weeks (14 days).

Fraction – Any part of a number, part or whole. For example, $\frac{3}{4}$ means 3 out of 4 equal parts. The top number is the **numerator** and the bottom number is the **denominator**.

Fractions of an amount – If you divide a quantity, total or size into equal parts then these are fractions of that amount.
For example a quarter of a metre is 25 cm.
$\frac{1}{4}$ of 100 cm = 25 cm.

Greater than – A larger value than another (>).

Highest common factor (HCF) – The highest number that can be divided exactly into each of two or more numbers, e.g. 6 is the highest common factor of 12 and 18.

Hundreds – The place value where that digit equals a number of hundreds.

Improper fractions – Any fraction where the **numerator** is bigger than the **denominator**. They are 'top-heavy' fractions, e.g. $\frac{10}{8}$ and are therefore greater than one whole.

Increasing – Making an amount larger.

Integer – Also called whole numbers, integers can be positive or negative but not fractions or decimal numbers.

Inverse – The inverse or opposite operation can be used to check your answer. So you could check a subtraction answer by doing an addition or a division answer by doing a multiplication.

Irregular – An irregular shape has sides of different lengths and interior angles that are not all equal.

Isosceles – A triangle with two equal sides and two equal angles.

Leap year – A year with an extra day on 29 February (366 days), which occurs every four years.

Least significant digit – The digit with the lowest place value, e.g. 345.6**8**

Length – A measure of the longest side of a shape measured in mm, cm, m, km, etc.

Less than – A smaller value when compared against another (<).

Line of symmetry – A line in which a shape can be reflected to give a mirror image of itself.

Lowest common denominator (LCD) – The denominator that other denominators can be divided into or are multiples of.
The LCD of $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{1}{6}$ is $\frac{1}{12}$ because all these fractions can be written with a denominator of 12 ($\frac{1}{3} = \frac{4}{12}$, $\frac{1}{4} = \frac{3}{12}$ and $\frac{1}{6} = \frac{2}{12}$).

Lowest common multiple (LCM) – The lowest quantity that is a multiple of two or more given quantities, e.g. 12 is the lowest common multiple of 2, 3, and 4.

Mean – Also called the arithmetic average. Add up all the values and divide by the number of values to find the mean.

Median – The middle value when all the values in a set of data are arranged from smallest to largest.

Midday – The point in time between a.m. and p.m. recorded as 12 noon or 12:00 midday.

Midnight – The point in time between p.m. and a.m. recorded as 12 midnight or 00:00

Mixed numbers – Numbers that are a mix of integer and fraction, e.g. $4\frac{3}{5}$.

Mode – The most commonly occurring value in a set of values.

Multiple – If a number divides by another without leaving a remainder then it's a multiple of that number. For example 48 is a multiple of both 6 and 8 because 48 ÷ 6 = 8.

Multiplying – A short way to add the same number together many times, you might hear this called 'lots of'. You will need to know the multiplication tables.

Negative number – A number to the left of zero on a number line. Recorded with a minus (–) sign before it (as the digits increase the number has less value, e.g. –10 has a lower value than –5).

Net – A 2D representation of a 3D shape opened up and folded out.

Number bonds – The corresponding numbers needed to make a given total, e.g. number bonds to 10: 1,9; 2,8; 3,7; 4,6; 5,5.

Numerator – The number above the line in a fraction.

Obtuse – Any angle between 90° and 180°.

Origin – The point where the x and y-axes meet with the coordinates (0,0).

p.m. – Any time after 12 noon or midday until 12 midnight.

Parallel – Lines which run the same distance apart and never meet.

Parallelogram – A four-sided shape (quadrilateral) where the opposite sides are parallel.

Percent – A value expressed as something 'out of' 100, e.g. 25% = 25 out of 100 = $\frac{25}{100}$

Perimeter – The distance around the outside of a shape. The perimeter of a circle is called the **circumference**.

Perpendicular – Perpendicular lines are at a right angle (90°) to each other.

Pie chart – A special chart that shows the relative sizes of data as sectors of a circle.

Place value – The position or place of each digit decides what value it has in the number.

Polygon – Any 2D shape with three or more straight sides.

Prime number – A whole number that has exactly two factors, one and itself. For example, 7 only has factors 1 and 7. 1 doesn't qualify because it only has one factor!

Product – The result of multiplying two or more numbers, e.g. the product of 2, 4 and 3 is 24.

Properties – The features that describe a shape, e.g. the number and size of sides and angles.

Proportion – A part of an amount compared to the whole. For example the proportion of white cars is one in every five. You can write this as a fraction $\frac{1}{5}$

Quadrant – The four areas that are created when you divide a grid with an x and a y-axis.

Radius – The distance from the edge of a circle to its centre.

Ratio – Compares different parts of the whole amount to each other. For example the ratio of red to white cars is three to four. You can write this as a ratio, 3:4.

Reasoning – Explaining and justifying your answer, for example by showing how you know that something is correct.

Recurring decimal – Decimals that have a repeating digit or a repeating pattern of digits. You might round them to a number of decimal places or use a symbol to show that they recur. For example $\frac{1}{3}$ can be shown as $0.\dot{3}$.

Reduce – Simplify a fraction to get the lowest **numerator** and **denominator** possible.

Reflection – A shape that is reflected is flipped across a mirror line without changing its size.

Reflex – An angle greater than 180° but less than 360°.

Regular – A regular shape has sides all the same length and all internal angles are equal.

Remainder – What's left over when the number you are dividing is not a multiple of the divisor. You can write it as a whole number (**integer**), fraction or decimal. In problems you usually have to round your remainder either up or down.

Rounding – Changing a number to a more convenient value, for example the nearest ten, hundred or thousand.

Scalene – A triangle where none of its sides or angles are equal.

Sequence – An ordered set of numbers, shapes or objects arranged according to a rule.

Simplify – To reduce a fraction to its simplest form by dividing the numerator and denominator by the same amount, e.g. $\frac{8}{24} = \frac{1}{3}$

Square – To find the square of a whole number you simply multiply it by itself. For example $4 \times 4 = 16$. You can show that a number is squared with a symbol, e.g. $9^2 = 81$.

Square root – The opposite of squaring. So the square root of 25 is 5. This is usually shown with a symbol, $\sqrt{}$. You can find this symbol on a calculator.

Straight angle – An angle that is exactly 180°.

Subtracting – Taking one number away from another. You might hear it called 'the difference between', 'minus' or simply 'taking-away'.

Symbol – A shape or letter that represents a number.

Symmetrical – A shape where one side is the mirror image of the other.

Tens – The place value where that digit represents a number of tens.

Term – The corresponding number in a sequence, e.g. the third term of the sequence 1, 3, 5, 7 is 5.

Trapezium – A four-sided shape where one pair of opposite sides is parallel.

Units of measurement – Most mathematics in real life involves money or measures. When giving an answer to a problem, remember to include the correct units of measurement, e.g. euros (€) or square metres (m^2).

Variable – A value in an equation that is represented by a symbol or letter.

Vertex (vertices) – The corner(s) of a 2D or 3D shape.

Vertically opposite – The angles opposite each other when two lines cross. They are equal.

Volume – The volume is the amount of space taken up by a three dimensional (3D) object. It is measured in cubic units, e.g. cubic centimetres (cm^3).