## Maths Glossary

24-hour - Time recorded as 24 continuous hours, e.g. I 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 $90^{\circ}$.
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 $=180^{\circ}$ e.g. $\qquad$
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 $\approx$ may be used to show this.

Area - The size that a surface takes up measured in 'square' units of measurement, e.g. square metres $\left(m^{2}\right)$.

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. I2 is a multiple of I, 2, 3, 4, 6 and I2.

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 $\mathrm{I}, 000$. 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. $3.78 \rightarrow 3.8$

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. $90^{\circ}$.

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. $2 X=10$ or $5 \times 3=10+5$.

Equilateral - A triangle with three equal sides and three equal angles (all $60^{\circ}$ ).

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 ( $\times, \div,+$ and - ) grouped together to show the value of something, e.g. $2+3$ or $7 Y+3$.

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 $100 \mathrm{~cm}=25 \mathrm{~cm}$.

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. $345.6 \underline{8}$

Length - A measure of the longest side of a shape measured in $\mathrm{mm}, \mathrm{cm}, \mathrm{m}, \mathrm{km}$, 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 $12\left(\frac{1}{3}=\frac{4}{12}, \frac{1}{4}=\frac{3}{12}\right.$ and $\left.\frac{1}{6}=\frac{2}{12}\right)$.

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 $48 \div 6=8$.

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 IO: I,9; 2,8; 3,7; 4,6; 5,5.

Numerator - The number above the line in a fraction.

Obtuse - Any angle between $90^{\circ}$ and $180^{\circ}$.
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 $\left(90^{\circ}\right)$ 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 I and 7. I 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 0.3 .

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 $180^{\circ}$ but less than $360^{\circ}$.

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 $180^{\circ}$.
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 $\mathrm{I}, 3,5,7$ 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 $\left(m^{2}\right)$.

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 ( $\mathrm{cm}^{3}$ ).

