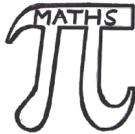


GCSE Maths  
revision

Glos-  sary -  
Mathematical  
words you  
need to know.

In this booklet you will find a collection of mathematical words and their meanings.

Make sure you understand them all before your exam!

Good luck!

*Miss Glinka*

*Maths teacher*

## A A

**Acute angle** An angle less than  $90^\circ$ .

**Algebra** Algebra is the branch of mathematics where symbols or letters are used to represent numbers.

**Angle** An angle is formed when two straight lines cross or meet each other at a point. The size of an angle is measured by the amount one line has been turned in relation to the other.

**Approximate** An approximate value is a value that is close to the actual value of a number.

**Arc** Part of a circumference of a circle.

**Area** The amount of space a shape takes up. E.g. the area of the lawn is 35 square metres.

**Asymmetrical** A shape which has no lines of symmetry.

**Average** A value to best represent a set of data. There are three type of average - the mean, the median and the mode.

**Axis** An axis is one of the lines used to locate a point in a coordinate system.

## B B

**Bearing** A three digit angle measured from north in a clockwise direction.

**Bisect** To divide an angle or shape exactly in half.

**Brackets** Used to determine the order in which operations are carried out. For example,  $3 + 4 \times 2 = 11$  but  $(3 + 4) \times 2 = 14$ .

## C C

**Calculate** To work out the value of something. This does not have to mean you need a calculator!

**Centilitre (cl)** A measure of volume. 100 centilitres = 1 litre (100 cl = 1 l). 1 centilitre = 10 millilitres (1 cl = 10 ml).

**Centimetre (cm)** A measure of distance. 1 centimetre = 10 millimetres. (1 cm = 10 mm). 100 centimetres = 1 metre. (100 cm = 1 m).

**Chord** A straight line drawn from one point on the edge of a circle to another.

**Circumference** The perimeter of a circle.

**Credit** To add money to a bank account. For example, I had £500 credited to my bank account.

## C C

**Cross section** The end section created when you slice a 3D shape along its length.

**Cube number** The product when an integer is multiplied by itself twice. For example 5 cubed =  $5 \times 5 \times 5 = 125$ .

**Cuboid** A 3D shape with all sides made from rectangles.

**Cumulative frequency** A running total of the frequencies, added up as you go along.

## D D

**Debit** To take out money from a bank account. For example, £400 was debited from my account.

**Decagon** A ten sided polygon.

**Decimal** Not a whole number or integer. For example, 3.6 or 0.235.

**Decrease** To make an amount smaller.

**Denominator** The bottom part of a fraction.

**Diameter** The distance across a circle which passes through the centre.

## D D

**Difference** Subtract the smaller value from the larger value to find the difference between two numbers.

**Distance** How far away an object is. For example, it is a distance of 3 miles to the city centre.

**Distribution** How data is shared or spread out.

## E E

**Equal** Used to show two quantities have the same value.

**Equation** Two expressions which have the same value, separated by an '=' sign. E.g.  $3y = 9 + y$

**Equilateral triangle** A triangle with all sides and angles the same size.

**Estimate** To find an approximate answer to a more difficult problem. E.g.  $31.2 \times 5.94$  is roughly equal to  $30 \times 6 = 180$ .

**Even number** Any number which is a multiple of 2. Even numbers always end in 2, 4, 6, 8 or 0.

**Expand** To multiply out brackets in an expression. For example,  $2(3x + 7) = 6x + 14$ .

**Expression** A collection of terms which can contain letters and numbers. E.g.  $4pq - q + 7$

## F F

**Factor** A number that divides another number exactly. E.g. 4 is a factor of 12.

**Factorise** To put an expression into brackets by taking out a common factor.

For example,  $20x + 15y = 5(4x + 3y)$ .

**Figures** Another name for numbers. For example one thousand and fifty in figures is 1050.

**Formula** An equation used to describe a relationship between two or more variables.

**Frequency** How many times something happens. Another word for 'total'.

**Frequency density** The frequency divided by the class width.

## G G

**Gradient** How steep a line is. Found by dividing the distance up by the distance across.

**Gram (g)** A measure of mass. 1 gram = 1000 milligrams. (1 g = 1000 mg)

**HCF** Stands for 'highest common factor'. It is the largest factor common to a set of numbers. E.g. The HCF of 16 and 24 is 8.

## H H

**Heptagon** A seven sided polygon.

**Hexagon** A six sided polygon.

## I I

**Increase** To make an amount larger.

**Indices** Another name for powers such as  $^2$  or  $^3$ .

**Integer** A whole number.

## J J

**Justify** Another word for 'explain'. Often crops up on your maths exam. E.g. 'Calculate the mean and range for each player. Who is the better player Justify your answer.'

## K K

**Kilogram (Kg)** A measure of mass. 1 kilogram = 1000 grams. (1 kg = 1000 g)

**Kilometre (Km)** A measure of distance. 1 kilometre = 1000 metres. (1 km = 1000 m)

## L L

**LCM** Stands for 'lowest common multiple'. It is the smallest multiple common to a set of numbers. E.g. The LCM of 3 and 4 is 12.

## L L

**Litre (l)** A measure of volume. 1 litre = 100 centilitres (1 l = 100 cl). 1 litre = 1000 millilitres (1l = 1000 ml).

**Loci** The plural of locus.

**Locus** A collection of points which are the same distance from another point or line.

**Lower range** The smallest value in a set of data.

## M M

**Mean** A type of average found by adding up a list of numbers and dividing by how many numbers are in the list.

**Median** The middle value when a list of numbers is put in order from smallest to largest. A type of average.

**Metre (m)** A measure of distance. 1 metre = 100 centimetres. (1 m = 1000 cm).

**Millilitre (ml)** A measure of volume. 10 millilitres = 1 centilitre (10 ml = 1 cl). 1000 millilitres = 1 litre (1000 ml = 1 l).

**Millimetre (mm)** A measure of distance. 10 millimetres = 1 centimetre. (10 mm = 1 cm).

**Modal** Another term for mode

## M M

**Mode** The most common value in a list of numbers. If two values are tied then there is two modes. If more than two values are tied then there is no mode. A type of average.

**Month** A time period of either 28, 30 or 31 days. There are 12 months in a year.

**Multiple** A number which is part of another number's times table. E.g. 35 is a multiple of 5.

A number which is part of another number's times table. E.g. 35 is a multiple of 5.

## N N

**Natural number** A positive integer

**Negative** A value less than zero

**Nonagon** A nine sided polygon.

**Numerator** The top part of a fraction.

## O O

**Obtuse angle** An angle between 90 and 180 .

**Octagon** An eight sided polygon.

**Odd number** A number that is not a multiple of 2. Odd numbers always end in 1, 3, 5, 7 or 9.

## O O

**Operation** An action which when applied to one or more values gives an output value. The four most common operations are addition, subtraction, multiplication and division.

## P P

**Parallel** Two or more lines which are always the same distance apart.

**Parallelogram** A quadrilateral with two pairs of parallel sides.

**Pentagon** A five sided polygon.

**Perimeter** The distance around a shape.

**Perpendicular** Two or more lines which meet at right angles.

**Pi ( $\Pi$ )** An irrational constant used when calculating the area and circumference of circles. It is approximately equal to 3.14.

**Polygon** A shape made from straight lines.

**Positive number** A number greater than zero.

**Prime** A number which has exactly two factors. The number one and itself i.e. 2,3,5,7,11...

## P P

**Prism** A 3D shape with the same cross section all along its length.

**Probability** A measure of how likely an event is to occur.

**Product** The answer when two values are multiplied together.

## Q Q

**Quadratic equation** An equation where the highest power is two. For example  $x^2 + 4x + 6 = 0$  is a quadratic equation.

**Quadrilateral** A four sided polygon/shape.

## R R

**Radius** The distance from the centre of a circle to its circumference. The plural of radius is radii.

**Random sampling** A method of choosing people at random for a survey.

**Range** The largest number take away the smallest value in a set of data.

**Rational** A decimal number which ends or is recurring.

## R R

**Recurring** A decimal which never ends but repeats all or parts of the sequence of numbers after the decimal point. E.g 0.333333 or 0.141414.

**Reflex angle** An angle greater than 180 .

**Regular** A shape with all sides and angles the same size.

**Remainder** The amount left over when a number cannot be divided exactly. For example, 21 divided by 4 is 5 remainder 1.

**Right angle** An angle of 90 .

**Rotation** To turn a shape using an angle, direction and centre of rotation.

**Round** To reduce the amount of significant figures or decimal places a number has. For example £178 to the nearest £10 is £180.

to the nearest £10 is £180.

## S S

**Scale factor** How many times larger or smaller an enlarged shape will be.

**Segment** An area of a circle enclosed by a chord.

## S S

**Sequence** A list of numbers which follows a pattern. For example 6, 11, 16, 21, ...

**Simplify** To write a sum, expression or ratio in its lowest terms. For example 4:10:6 can be simplified to 2:5:3.

**Solid** A 3D shape.

**Solve** To find the missing value in an equation.

**Speed** How fast an object is moving. Average speed = Total distance divided by time taken.

**Square number** The product when an integer is multiplied by itself. For example, 1, 4, 9, 16, 25, 36, 49, 64, 81, 100.

**Sum** The answer when two or more values are added together.

**Surface area** To total area of all sides on a 3D shape.

**Symmetrical** A shape which has at least one line of symmetry.

## T T

**Tally** A system of counting where every group of four vertical lines is followed by a horizontal line to easily count in steps of five such as IIII. represents 5.

## T T

**Tangent** A straight line that just touches a point on a curve. A tangent to a circle is perpendicular to the radius which meets the tangent.

**Term** A number, variable or combination of both which forms part of an expression.

**Transformation** The collective name for reflections, rotations, translations and enlargements.

**Translation** To move a shape from one position to another by sliding in the x-axis followed by the y-axis.

**Trapezium** A quadrilateral with one pair of parallel sides.

**Tree diagram** A method of solving probability questions by listing all the outcomes of an event. Probabilities are calculated by multiplying down the branches.

**Triangle** A three sided polygon.

**Triangular number** A sequence of numbers generated by adding one more than was added to find the previous term. For example, 1, 3, 6, 10, 15, 21, ...

## U U

**Units** A quantity used to describe a measurement. Examples are kilograms, metres and centilitres.

**Upper range** The largest value in a set of data.

## V V

**Value** A numerical amount or quantity.

**Variable** A letter which we don't know the value of.

**Volume** The amount an object can hold. E.g. a bottle of cola has a volume of 2 litres.

## W W

**Wide** Used to describe the width of something

**Width** The distance from side to side. E.g. 'The swimming pool is 10 metres wide.'

## X X

**X-Axis** The horizontal axis on a graph. The line going across the page.

## Y Y

**Y-Axis** The vertical axis on a graph. The line going from top to bottom.

## Y Y

**Y-Intercept** The value of the y-coordinate when a graph crosses the y-axis.

**Year** A time period of 12 months or 365 days.  
(366 in a leap year.)

## Z Z

**Z-Axis** Represents the depth of an object when working with 3D coordinates.