



Connaught Junior School

Understanding Mathematical Terms



Here are some of the mathematical terms that we use at school. Some parents may be very familiar with them but hopefully this will help make some of the things that your children talk about a little clearer.

Acute angle	An angle less than 90°									
Angle	<i>Measures</i> turn (measured in degrees).									
Array	An orderly arrangement, often in rows or columns									
Bar chart	A way of showing information by the lengths of a set of bars									
BODMAS	A mnemonic for order in which mathematical calculations are done: Brackets order of Division Multiplication Addition Subtraction									
Borrowing	A meaningless phrase used in subtraction when what we should be saying is exchanging <i>see below</i>									
Bridging	A strategy in the mental calculation of an operation introducing an interim step of crossing 10 (or 100) or multiples thereof, ie taking the numbers in the calculation to the nearest 10/100 with appropriate compensation to make the calculation more straightforward									
Cardinal number	Cardinal numbers are the “natural numbers” (ie those used in counting) which are used to describe “how many” objects there are in a set. Cardinality is the understanding of cardinal value, that the final number represents the whole number in the set									
Carroll diagram	A sorting diagram named after Lewis Carroll, author and mathematician <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>Even</th> <th>Odd</th> </tr> </thead> <tbody> <tr> <td>Multiples of 5</td> <td>30, 40</td> <td>35</td> </tr> <tr> <td>Not multiples of 5</td> <td>32, 34, 36, 38</td> <td>31, 33, 37, 39</td> </tr> </tbody> </table>		Even	Odd	Multiples of 5	30, 40	35	Not multiples of 5	32, 34, 36, 38	31, 33, 37, 39
	Even	Odd								
Multiples of 5	30, 40	35								
Not multiples of 5	32, 34, 36, 38	31, 33, 37, 39								
Data handling	Manipulating data to graph form etc									
Decomposition	Breaking down a number eg to exchange a ten in to ten units									
Denominator	The bottom digit(s) in a fraction representing the number of fractional parts that the unit or whole has been divided into									
Difference	The answer to a subtraction									
Digit	A single figure in any number									
Edge	The “side” or line of a 3d shape									
Equilateral	A triangle where each side and internal angle is equal									
Equivalent fraction	Two or more fractions which have the same value but are different in form									
Exchange	Using eg a ten from the tens column and exchanging it for 10 units to help in a column subtraction									
Face	The flat side of a 3d shape (polyhedron)									
Factor	A number which divides into another number exactly									
Improper fraction	A fraction with a larger numerator than denominator (ie in value more than a whole)									



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Integer	A whole number (it can be positive or negative) and zero
Inverse operation	The reverse effect – eg division is the inverse to multiplication
Isosceles	A triangle with two equal sides and internal angles
Mean	The sum of the values in a set of data divided by the total number of items in that set
Median	The middle value of a set of ordered data (if there are two middle values, the median is the mean of the two)
Mixed number	An improper fraction represented by a mixture of a whole number and a proper fraction
Mode	The value that occurs most often in a set of data
Multiple	A multiple is a number made by multiplying together two other numbers. (A number is a multiple of any of its factors)
Negative	Less than zero
Number bond	A pair of numbers with a particular total, eg the number bonds to 10: 0 and 10, 1 and 9, 2 and 8 etc
Number line	A line on which numbers can be represented – a really useful learning tool!
Numeral	The symbol or collection of symbols used to represent a number. Historically, there are many variations of these symbols depending on the numeration system used. Our system is the Hindu-Arabic place value system whereby all numbers can be represented using a finite set of digits, namely 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.
Numerator	The top digit(s) in a fraction representing the number of fractional parts
Obtuse angle	An angle of more than 90 degrees but less than 180 degrees
Ordinal	A number defining a position in a series or set eg first, second etc
Partition	To “break” a number up into a separate set of numbers which add up to make the original number. A mental strategy often used to simplify operations, for example; 12×3 might be more easily calculated by partitioning the 12 in to 10 and 2, so that $10 \times 3 = 30$ and $2 \times 3 = 6$, so $12 \times 3 = (30 + 6) = 36$
Perimeter	<i>Measures</i> the complete distance around the outside of a figure
Pie chart	A circle graph cut into sectors where each sector represents a proportion of the whole (calculated by reference to the 360 degrees of a circle)
Place holder	A zero placed in a calculation (eg long multiplication) to hold the value of the place.
Place value	The value given to as digit depending on its place in a number: thousands, hundreds, tens, units, etc
Prime number	A number which has only two factors: itself and 1, ie it can only be divided by itself and 1
Product	The answer to a multiplication
Proper fraction	A fraction with a larger denominator than numerator (ie in value less than a whole)
Proportion	A comparison of part of a quantity with the whole
Quotient	The result given by the operation of division



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Range	The difference between the smallest and largest values in a set of data
Ratio	A comparison between two (or more) quantities
Reflex angle	An angle of more than 180 degrees but less than 360 degrees
Remainder	The amount left when one number is divided into another
Right angle	An angle of exactly 90 degrees
Rotation	Turning a figure around a fixed point (the centre of rotation). The shape and size remain unchanged, the two images are congruent
Rounding	Eg to the nearest 10 (5+ rounds up, 4 and less round down)
Scalene	A triangle where all 3 sides and internal angles are different
Simplified fraction	A fraction in its simplest form expressed with the smallest numerator and denominator eg 4/8 simplifies to 1/2
Square number and cube number	The result of multiplying a number by itself (square number) and by the original number again (cube number)
Square root	The number that is multiplied by itself to give a square number.
Sum	The answer to an addition
Tally	A mark made to keep count of a number of objects or events
Tessellation	An arrangement of 2d shapes usually of the same size and shape to cover a space without gaps or overlapping
Translation	Moving a shape from one place to another just by sliding it (without rotating, reflecting or enlarging) such that every point in the shape can be joined to its corresponding point in the transformed shape by a set of straight lines which are all parallel and of equal length
Venn diagram	A graph used to give a pictorial view of the relationships of sets and subsets within a universal set; the universal set is shown enclosed by a rectangle, and all the others by circles or simple closed curves.
Vertex	The corner points of a 2d or 3d shape
Vulgar fraction	A fraction with numerator and denominator