

TUGGERAH PUBLIC SCHOOL

MATHEMATICS GLOSSARY OF TERMS

<https://curriculum.nsw.edu.au/resources/glossary>

Array - An array is one of several different arrangements that can be used to model multiplicative situations involving whole numbers. It is made by arranging a set of objects, such as counters, into columns and rows. Each column must contain the same number of objects as the other columns, and each row must contain the same number of objects as the other rows.

Attribute - A quality, feature or characteristic of an object or shape.

Commutative property - Commutative property of addition or multiplication means that two numbers can be added or multiplied in any order and the solution will be the same. Commutative law, commutativity and turn-around facts are interchangeable terms.

Difference - The difference of two numbers is the result of subtracting one from the other. You can use subtraction or addition to find the difference between two numbers. For example: To find the difference between 15 and 21, you can: add 5 up from 15 to get to 20, then add one more to get to 21, so the difference is 6. Start with 21 and count back to find the difference of 6.

Doubling and Halving - Doubling and halving is a strategy that can make solving multiplication problems easier, eg solving 4×12 is the same as solving 2×24 . Doubling and halving is also a strategy used to find factors of a number. For example: to find the factors of 24, start with 1×24 then double and halve, 2×12 , 4×6 , 8×3 .

Equivalent - Two things are equivalent if they have the same value. See equal sign.

Hefting - Testing the weight of an object by lifting and/or balancing it.

Inverse operations - The operation that reverses the effect of another operation.

Examples: Addition and subtraction are inverse operations. When you add 3 to 7 you get 10. If you then subtract 3, you get back to 7.

Multiplication and division are inverse operations. When you multiply 6 by 2 you get 12. If you then divide by 2 you get back to 6.

Jump strategy - A mental calculation method that involves jumping from one number (usually the largest number) either forwards (addition) or backwards (subtraction) to the solution.

Linear pattern - A pattern created by the regular repetition of units with the same difference between terms.

Number bonds - Combinations (pairs) of numbers that add to a given number, eg $8 + 2$, $6 + 4$, and $7 + 3$ all bond to form 10.

Number line - A number line is used to represent numbers according to their distance from a zero point. The representation of a number line can start and end on any number.

Number sentence - A number sentence uses numerals and mathematical symbols. A number sentence may be used instead of the word equation. For example: instead of writing 6 apples plus 7 apples equals 13 apples, the number sentence would be $6 + 7 = 13$.

One to one data display - Display of data using objects and pictures where one object or picture represents one data value.

Partition - Partitioning is dividing a quantity into parts. In the early years it commonly refers to treating whole numbers as made up of two parts (number bonds), eg 10 is 8 and 2. In later years it refers to dividing both continuous and discrete quantities into equal parts (equi-partitioning) when learning about fraction and division concepts.

Picture graph - Display of data using images, symbols or pictures to represent data in categories.

Place Value system - The place value system has 4 properties: positional, base-ten, additive and multiplicative. The value of a digit is determined by its position in a number relative to the ones (or units) place. For example: in the number 924, the 4 denotes 4 ones, the 2 denotes 2 tens or 20 ones, and the 9 denotes 9 hundreds, 90 tens or 900 ones.

Regular shape - A two-dimensional polygon with all sides and all interior angles equal. A square is an example of a regular shape.

Repeated addition - An early strategy for solving multiplication problems used to add groups of the same quantity. For example: $3 + 3 + 3 + 3$ to solve 4 groups of 3.

Rhythmic counting - Rhythmic counting refers to the repeated sound pattern that students may use to vocalise the count – creating a beat to emphasise the pattern.

Sharing division - Sharing (partitive) division requires finding how many are in each group, e.g. if 12 marbles are shared between 3 students, how many does each student get? When sharing, the quotient represents the quantity of shared objects in each group.

Skip counting - Skip counting is counting forwards or backwards in groups or multiples of a particular number, e.g. 5, 10, 15, 20

Subitising - instantaneously recognising the number of objects in a small group without the need to count them.

Uniform - Means 'the same as'. Used to refer to units of the same size used for measuring.