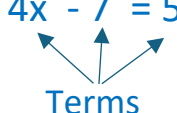
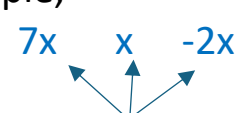


algebra al / ge / bra	Letters and symbols used in place of numbers to: Represent numbers and quantities in formulas and equations. Helps solve problems with unsolved values
simplify sim / pli / fy	To make simpler Used in algebra $4x + 2x - 1 = ?$  $6x - 1 = 5x$
variables var / i / a / bles	Unknown numbers that Can take on a range of values, often represented by a letter $x, y, z, t..$ etc. For example, in the equation: $x + 3 = 10$ (x is the variable)
constants con / stant	A number that: Has a fixed value (does not change). For example, in the equation: $y = 3x + 6$ (6 is a constant, 3 is a coefficient as it is multiplying a variable)

operations op / er / a / tions	Rule for combining numbers. Following are all operations addition subtraction multiplication division
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terms	A single number or variable or numbers or variables multiplied together. Usually separated by a + or - sign $4x - 7 = 5$ 
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like terms	Variables Such as (x or y) that are the same. For example, $7x \quad x \quad -2x$  All like terms because the variables are all 'x'
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expressions ex / pres / sions	Maths sentence made of: constants (fixed value) variables (letters) coefficients (amount of variable) operations (symbol) without an equal sign. $4x - 7$
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substitution sub / sti / tu / tion	Putting numbers where the letters are. For example: You have $x - 4$ You know $x = 10$ You substitute 'x' for 10 $10 - 4 = 6$
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evaluate e / val / u / ate	Calculate the value of an expression (maths sentence) by: Substituting the variables (letters) with constants (numbers). For example: expression $3x + 5$ If $x = 2$ then $3 \times 2 + 5 = 6 + 5 = 11$
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equation e / qua / tion	Mathematical statement with an: Equal sign (=) showing two things are equal. $2x + 1 = 9$ is an equation because it says $2x + 1$ is equal to 9
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index notation in / dex no / ta / tion	Repeated multiplications by the same number. For example: $10 \times 10 \times 10 \times 10 \times 10$ would be simplified as 10 to the power of 5 (10^5) $a \times a \times a$ would be simplified as a to the power of 3 (a^3)
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index laws	Rules that make it easier to Simplify expressions that involve powers of the same base number.
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product prod / uct	Result of Multiplying one number by another. Product of 9 and 6 is 54 $9 \times 6 = 54$ Product of 13, 4 and 12 is 624 $13 \times 4 = 52$ and $52 \times 12 = 624$
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quotient quo / tient	Result of Dividing one number by another $28 \div 7 = 4$ ↙ dividend ↘ divisor ↘ quotient
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exponent ex / po / nent	Tells you How many times to multiply a number by itself. Also known as power or an index $10^5 \rightarrow 10 \times 10 \times 10 \times 10 \times 10 = 1,000,000$
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distributive law dis / trib / u / tive	Multiplying a number by A group of numbers added together is the same as doing each multiplication separately. $3 \times (2 + 4) = 3 \times 2 + 3 \times 4$
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expand ex / pand	Multiply Each term on the outside of a bracket by each term on the inside. $3(x + 4) \longrightarrow 3x + 12$
---------------------------------------	--

factorise fac / tor / ise	Process of finding the factors by Taking out a common factor and putting the expression into brackets. $6x + 12 \rightarrow 6(x + 2)$
--	--

proper fraction	Numerator is less than its denominator. $\frac{3}{5}$ 3 Smaller 5 Larger
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improper fraction	Numerator is greater than its denominator. 
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mixed number	Combines a whole number (integer) written with a proper fraction 
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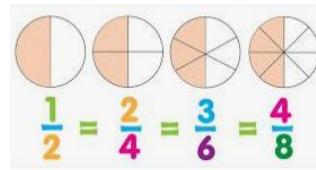
numerator nu/ mer / a / tor	Top number in a fraction Shows how many parts we have out of the whole numerator → 
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denominator de/ nom / i / na / tor	Bottom number in a fraction Shows how many equal parts there are in total denominator → 
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equivalent fractions

e / quiv / a / lent frac / tions

Fractions with the same value



simplest form

simp / lest

When a fraction cannot be reduced any further.

The numerator and denominator have no common factors other than 1

$$\frac{4}{10} \div 2 = \frac{2}{5}$$

reciprocal

re / cip / ro / cal

The number you multiply to get a product of 1.

To find the reciprocal of a fraction you switch the numerator and denominator

Reciprocal

$$\frac{3}{4} \times \frac{4}{3} = 1$$