Maths vocabulary

Ordinal numbers

1st	first	10th	tenth	20th	twentieth	100th	hundredth
2nd	second	11th	eleventh	21st	twenty-first	101st	hundred and first
3rd	third	12th	twelfth	22nd	twenty-second	200th	two hundredth
4th	fourth	13th	thirteenth	30th	thirtieth	$1,000^{th}$	thousandth
5th	fifth	14th	fourteenth	40th	fortieth	$1,345^{th}$	one thousand three hundred
6th	sixth	15th	fifteenth	50th	fiftieth		and forty-fifth
7th	seventh	16th	sixteenth	60th	sixtieth	$1,000,000^{th}$	millionth
8th	eighth	17th	seventeenth	70th	seventieth	$1,000,000,000^{th}$	billionth
9th	ninth	18th	eighteenth	80th	eightieth		
		19th	nineteenth	90th	ninetieth		

How to read fractions

1/2	one half	1/4	one quarter / one fourth	3/2	three halves	6/8	six eighths
1/3	one third	1/5	one fifth	3/4	three quarters	4/9	four ninths

Basic arithmetic

Operation	Example	Say it like this
Addition	5+3=8	five plus three equals eight five added to three equals eight
Subtraction	10-6=4	ten minus six equals four ten minus six is four six subtracted from ten equals four
Multiplication	2x9=18	two multiplied by nine equals eighteen two times nine is eighteen two times nine equals eighteen
	2(a+b)	two times the sum of a plus b
Division	16÷2=8	sixteen divided by two equals eight sixteen divided by two is eight
	10/20	ten over twenty

Definitions

Equation ➔ e.g. $3y^2 - 4y + 3 = 8$

Variable ➔ A letter representing, or standing in place of, an unknown amount

Formula ➔ e.g. U=R.I

Coefficient ➔ A number placed in front of a variable or brackets, e.g. 3y or 4(y+z)

Term ➔ An element in an equation. In the following equation $3y^2 - 4y + 3 = 8$, 3y2 or 4y or 3 or 8 are terms

Numerator ➔ The upper number of a fraction, e.g. in ¾ the numerator is 3

Denominator ➔ The lower number of a fraction, e.g. in ¾ the denominator is 4

Fraction ➔ An expression showing one number divided by another e.g. ¾

Integer ➔ A whole number, e.g. 2

Decimal number ➔ A decimal number contains a decimal point separating the whole number from the decimal part

Common factor ➔ A common number or variable that divides into another number, e.g. y=3x+6x, x is a common factor

Powers ➔ The power of a number tells you how many times to multiply the number by itself, e.g. 3^2, 2 is the power

Square ➔ A number multiplied by itself (a power of two) e.g. $3^2 = 9$ (square of three is nine)

Square root ➔ The opposite to finding the square of a number, if $x^2 = y$ then $x = \sqrt{y}$ (x equal square root of y)

Cube ➔ A number multiplied by itself three times (a power of three) e.g. $2^3 = 8$

Cube root ➔ If $x^3 = y$, then x is the cube root of y, i.e. $x = \sqrt[3]{y}$

Negative number ➔ A number or variable whose value is less than 0, e.g. −2

Positive number ➔ A number or variable whose value is greater than 0, e.g. +2

Calculation ➔ When we add, subtract, multiply, and divide numbers we make a calculation

Result ➔ e.g. When we add 6 and 5 the result is 11

Percentage ➔ Out of 100. Also a fraction with 100 in the denominator

even ➔ e.g. 2, 4, 6, 8, 10, 12, 14, …

odd or **uneven** ➔ e.g. 1, 3, 5, 7, 9, 11, 13, 15, …

Subscript ➔ e.g U1,U2,U3 (1, 2 and 3 are the subscript)

Subject ➔ e.g $y = x - 2$ (y is the subject) . Make x the subject of this equation becomes $x = y + 2$

Expressions

Solve an equation ➔ Find value of the variable that satisfy an equation

Simplify ➔ e.g. $\frac{8}{12} = \frac{2}{3}$

Cancel ➔ e.g. $y + 5 = x + k + 5$

Invert ➔ Turn upside down, e.g. inverting $\frac{5}{3}$ becomes $\frac{3}{5}$

Approximating ➔ Giving a number near to its true value when an exact value of that number is not required

Estimate ➔ Round the numbers into easy, convenient numbers, for use in a calculation

Rounding ➔ A way of approximating numbers when an exact value is not required

Rearranging or Changing the subject ➔ e.g. rearrange the following equation $y = x - 2$ in terms of x becomes $x = y + 2$

e.g. change the subject of $y = x - 2$ to x becomes $x = y + 2$

Expanding brackets or Multiplying out ➔ Multiplying terms by the contents of the brackets e.g. 4(x+2) = 4x +8

Increase ➔ e.g. Increasing a value of 100 by 20 is 120

Decrease ➔ e.g. Decreasing a value of 100 by 20 is 80

Reciprocal ➔ The reciprocal of x is $\frac{1}{x}$

Cross-multiplying ➔ e.g. $\frac{a}{b} = \frac{c}{d}$ giving $a.d = c.b$

Factorising ➔ e.g. Extracting the factor of 7x + xy = x(7+y)

Correct ➔ Right, true

Incorrect ➔ False, not true, wrong, when you make mistakes or errors

Greater than ➔ e.g. 36 is greater than 35

Greater than or equal to ➔ e.g. Your have success in exam when your result is greater than or equal to ten.

Less than ➔ e.g. 34 is less than 35

Calculate or Compute ➔ We calculate when we add, subtract, multiply, and divide numbers

Add ➔ e.g. When we add 2 and 3 the result is 5, when we add 2 to 3 the result is 5

Subtract ➔ e.g. When we subtract 2 of 3 the result is 1, when we subtract 2 from 3 the result is 1

Multiply ➔ e.g. When we multiply 2 by 3 the result is 6

Divide ➔ e.g. When we divide 2 by 3 the result is 0.666

Substituting ➔ e.g. Replacing a term in an equation by an other equation

Examples

Examples	Say it like this
10^4	ten exponent four, ten exp four, ten to the exponent four, ten to the power four, ten to the four, four is the exponent of ten
68.10^3	sixty eight times ten exponent three
$0.92.10^{-5}$	nought point nine two times ten exponent minus five (We replace "," by a ".")
10^{-4}	ten to the negative four
$R = \dfrac{V}{I}$	R equals V over I R equals V divided by I
V= IR	V equals I R ; V equals I by R V equals I multiplied by R
$V(t) = V_M.\cos(wt - \Phi)$	V of t equals V sub M by cosine open brackets wt minus φ close brackets
$\Delta = \sqrt{\dfrac{1}{N}\sum_{i=1}^{N}(x_i - m)^2}$	Δ equals root of 1 over N by the summation from one to N of x sub i minus m all to the square
$y = f(x)$	y equals f of x
$\dfrac{T^2}{a^3} = const$	T squared over a cubed equals constant
$\alpha = \tan^{-1}\left(\dfrac{y}{x}\right)$	α equals inverse tangent open brackets y over x close brackets
$\sinh x = \dfrac{e^x - e^{-x}}{2}$	Hyperbolic sine x equals e to the power x minus e to the power minus x, all over 2