Reading Mathematics

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This is the way English people read mathematical formulae. It is something you won't find in any book or dictionary. To draw this list, I - who am not English mother tongue - asked for the help of friends and acquaintances. Thanks in advance to whoever will help me complete this table with any missing detail, or correct any mistake.

Basics

	formal	less formal
$a + b = c$	a plus b equals c	
$- a$	minus a negative a	
$a - b$	a minus b	
$a \pm b$	a plus or minus b	
$a < b$	a (is) less than b	
$a > b$	a (is) greater than b	a more than b
$a \leq b$	a less than or equal to b	
$a \geq b$	a greater than or equal to b	
$a < x < b$	a is less than x which is less than b x greater than a and less than b	
x'	x prime	
x''	x double prime	
x_n	x subscript n	x sub n
x_1	x subscript one	x sub 1
$x_{1,2}$	x sub 1 comma 2	
π	pi	

Products and ratios

	formal	less formal
$3 \times 5 = 15$	three times five makes (is/are/equals) fifteen	three times five, fifteen
a b	a multiplied by b product a (and) b	a times b a b
a(b+c)	a times the sum of b plus c	a times b plus c
1/3	one third	
a÷b	a divided by b	
a/b	a divided by b	a over b
1/a	reciprocal (of) a	one over a
1/n	reciprocal (of) n	one over n
a/2	a divided by two	half a
a:b = c:d	the ratio a to b equals the ratio c to d	a is to b as c is to d

Powers and roots

	formal	less formal
x^0	x to the power of nought x to the zero power	x to the nought x to the zero
x^1	x to the power of one x to the first (power)	x to the one
x^2	x to the power of two x squared	
x^3	x to the power of three x to the third x cubed	
x^4	x to the power of four x to the fourth	x to the four
x^{-1}	x to the power of minus one	x to the minus one
x^{-2}	x to the power of minus two	x to the minus two
x^a	x to the power of a	x to the a
x^{-a}	x to the power of minus a	x to the minus a
$(a+b)^2$	a plus b, in brackets, all	a plus b, squared

	squared the sum a and b, squared	
$\sqrt{x}$	square root (of) x	root x
$2\sqrt{3}$	two times square root of three	two root three
$\sqrt[3]{x}$	cube root (of) x	
$\sqrt[4]{x}$	fourth root (of) x	
$\sqrt[n]{x}$	n-th root (of) x	

Goniometric and hyperbolic functions

	formal	less formal
sin x	sine (of) x	
cos x	cosine (of) x	cos-x
tan x	tangent (of) x	tan-x
$\sin^2 x$	sine (of) x, squared	sine squared x
$\cos^2 x$	cosine (of) x, squared	cos squared x
$\tan^2 x$	tangent (of) x, squared	tan squared x
Sh x	hyperbolic sine (of) x	shine x
Ch x	hyperbolic cosine (of) x	cosh x
Th x	hyperbolic tangent (of) x	than x

Calculus

	formal	less formal
f(x)	f of x	
g(x)	g of x	
dy/dx	derivative of y with respect of x	d-y by d-x

$\int f(x)dx$	integral of f of x d-x	
$\int_a^b f(x)dx$	integral of f of x d-x from a to b	

Vectors

	formal	less formal
a · b	scalar product of **a** and **b** dot product of **a** and **b**	**a** dot **b**
a x **b**	vector product of **a** and **b** cross product of **a** and **b**	**a** cross **b**

Miscellanea

	formal	less formal
$\log_a x$	logarithm to the base a of x	log of x to base a