

# Spoken mathematics

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Symbol	Speak
$\rightarrow$	arrow to the right or approaches
$\leftarrow$	arrow to the left or withdraws
$\uparrow$	arrow pointing up or upward arrow
$\downarrow$	arrow pointing down or downward arrow
$\vec{a}$	vector $a$
$\cup$	union
$\cap$	intersection
$\subset$	contained in or subset of
$\supset$	contains
$\Rightarrow$	implies
$\Leftrightarrow$	equivalent to
$\exists$	there exists or there is
$\forall$	for every

Spoken  
mathematics

Mohamed  
Mamchaoui

Greek  
Alphabet

BASIC  
SYMBOLS

Algebra

## Section 3. Algebra

Expression	Speak
$a + b$	$a$ plus $b$
$a + b + c$	$a$ plus $b$ plus $c$
$a - b$	$a$ minus $b$
$-a - b$	minus $a$ minus $b$
$a + b - c$	$a$ plus $b$ minus $c$
$a - b - c$	$a$ minus $b$ minus $c$
$a - (b + c)$	$a$ minus the sum $b$ plus $c$ or $a$ minus the quantity $b$ plus $c$
$a - (b - c)$	$a$ minus the difference $b$ minus $c$ or $a$ minus the quantity $b$ minus $c$
$a - (-b - c)$	$a$ minus the quantity minus $b$ minus $c$
$a - (b + c) - d$	$a$ minus the quantity $b$ plus $c$ end of quantity minus $d$
$a - b - (c - d)$	$a$ minus $b$ minus the difference $c$ minus $d$
$a \times b$ or $a.b$ or $ab$	$a$ times $b$ or $a$ cross $b$ or the product of $a$ and $b$ or $a$ multiplied by $b$
$a(b + c)$	$a$ times the sum $b$ plus $c$ or $a$ times the quantity $b$ plus $c$

Expression	Speak
$\frac{1}{2}$	one half or one over two
$\frac{1}{3}$	one third or one over three
$\frac{1}{n}$	one over $n$
$\frac{a}{d}$ or $a/d$	$a$ over $d$ or $a$ divided by $d$
$\frac{a+b}{d}$	the quantity $a$ plus $b$ divided by $d$
$a + \frac{b}{d}$	$a$ plus the fraction $b$ over $d$
$a + \frac{b}{c+d}$	$a$ plus the fraction $b$ divided by the quantity $c$ plus $d$
$\frac{a+b}{c} + d$	the quantity $a$ plus $b$ over $c$ , that fraction plus $d$
$\frac{a}{b} + \frac{c}{d}$	the fraction $a$ over $b$ plus the fraction $c$ over $d$
$\frac{\frac{a}{b}}{d}$	$a$ over $b$ , that fraction divided by $d$
$\frac{\frac{a}{c}}{d}$	$a$ divided by the fraction $c$ over $d$
$\frac{c}{d}(a+b)$	the fraction $c$ over $d$ times the sum $a$ plus $b$
$\frac{\frac{a}{b}}{c+d}$	$a$ divided by the fraction $b$ over the quantity $c$ plus $d$

Expression	Speak
$ay + bx + c = 0$	$a$ $y$ plus $b$ $x$ plus $c$ equals zero
$y = mx + b$	$y$ equals $m$ $x$ plus $b$
$y = ax^2 + bx + c$	$y$ equals $a$ $x$ squared plus $b$ $x$ plus $c$
$x^2 + y^2 = r^2$	$x$ squared plus $y$ squared equals $r$ squared
$y = \pm\sqrt{r^2 - x^2}$	$y$ equals plus or minus square root of the difference of $r$ squared and $x$ squared
$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$	the fraction $x$ squared over $a$ squared plus the fraction $y$ squared over $b$ squared equals one
$a^x$	$a$ to the $x$ or $a$ raised to the $x$ power
$e^x + y$	$e$ to the $x$ power plus $y$
$a_1 + a_2 + \dots + a_n$	$a$ sub 1 plus $a$ sub 2 plus dot dot dot plus $a$ sub $n$
$a_1 \times a_2 \times \dots \times a_n$	$a$ sub 1 times $a$ sub 2 times dot dot dot times $a$ sub $n$
$p(x)$	$p$ of $x$
$p(x) = 3x^2 + 2x - 4$	$p$ of $x$ equals 3 $x$ squared plus 2 $x$ minus 4
$q(x) = x^3 - 8$	$q$ of $x$ equals $x$ cubed minus 8

Here are some French mathematical terms beginning with the letter B, with their English translations:

barycentre = barycenter

base = basis

base de numération = number system

bijectif = bijective

bilinéaire = bilinear

binôme = binomial

bissectrice = angle bisector

borne = bound

borne inférieure = greatest lower  
bound

borne inférieure = infimum

borne supérieure = least upper bound

borne supérieure = supremum

borné = bounded

boucle (algorithme) = loop