

Spoken mathematics

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Spoken
mathematics

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Greek
Alphabet

BASIC
SYMBOLS

Section 2. BASIC SYMBOLS

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BASIC
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Symbol	Speak
$+$	plus or positive
$-$	minus or negative
\times or $.$	multiplies or times
\div or $/$	divided by
$ $	absolute value
$ $	divides
\pm	plus or minus
\oplus	circle plus
\otimes	circle cross
$=$	equals or equal to
\neq	does not equal or not equal to
\equiv	identical to
\ncong	not identical to

Symbol	Speak
\approx	approximately equal to
\leq	less than or equal to
$<$	less than
\geq	greater than or equal to
$>$	greater than
\lesssim	approximately equal but less than
\gtrsim	approximately equal but greater than
$($	open parenthesis or left parenthesis
$)$	closed parenthesis or right parenthesis
$[$	open bracket or left bracket
$]$	closed bracket or right bracket
$\{$	open brace or left brace
$\}$	closed brace or right brace

Symbol	Speak
$ a $	absolute value of a
a'	a prime
a''	a double prime
$a^{[n]}$	a with n primes
a_n	a subscript n or a sub n
\bar{a}	a bar
a^*	a star
\sqrt{a}	square root of a
$\sqrt[3]{a}$	cube root of a
$\sqrt[n]{a}$	n th root of a

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Symbol	Speak
Π	product
Σ	summation
\int	integral
$\frac{d}{dx}$	d over dx or the derivative with respect to x
$\frac{\partial}{\partial x}$	the partial derivative with respect to x or partial over partial x
$!$	factorial
∇	del or nabla
Δ	delta or discriminant
$*$	star
\parallel	parallel
\perp	perpendicular

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

Abscisse = Abscissa

Addition = Addition

Algèbre = Algebra

Algorithmique = Algorithmics

Angle = Angle

Approximation = Approximation

Axiome = Axiom

Analyse = Analysis

Antécédent = Preimage or

Antecedent

Arithmétique = Arithmetic

Aire = Area

Associativité = Associativity

Affine = Affine

Amplitude = Amplitude

Application = Function or Mapping

Asymptote = Asymptote

Arrondi = Rounding

Angle droit = Right angle

Axe = Axis

Examples

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- **Abscissa** - The abscissa of the point $(3, 4)$ is 3.
- **Addition** - The addition of 5 and 3 gives 8.
- **Algebra** - Algebra is essential for solving equations with unknown variables.
- **Algorithmics** - Algorithmics is important in computer science for creating efficient programs.
- **Angle** - The angle between the two lines is 45 degrees.
- **Approximation** - We use approximation when an exact answer is not necessary.
- **Axiom** - In geometry, an axiom is a statement accepted without proof.
- **Analysis** - Analysis helps us understand the behavior of functions.

- **Preimage (Antecedent)** - The preimage of 4 under the function $f(x) = x^2$ is ± 2 .
- **Arithmetic** - Arithmetic involves basic operations like addition and subtraction.
- **Area** - The area of a circle is calculated as πr^2 .
- **Associativity** - Addition is associative because $(a + b) + c = a + (b + c)$.
- **Affine** - An affine transformation preserves points and straight lines.

- **Amplitude** - The amplitude of the sine wave is 2.
- **Function (Mapping)** - A function maps each input to exactly one output.
- **Asymptote** - The curve has a horizontal asymptote as x approaches infinity.
- **Rounding** - We round 3.14159 to 3.14 for simplicity.
- **Right angle** - A square has four right angles, each 90 degrees.
- **Edge** - Each edge of a cube meets at a right angle.
- **Axis** - The x -axis and y -axis divide the coordinate plane.