

Basic Math symbols

Symbol	Symbol Name	Meaning / definition	Example
=	Equals sign	equality	$5 = 2+3$ 5 is equal to 2+3
\neq	not equal sign	inequality	$5 \neq 4$ 5 is not equal to 4
\approx	approximately equal	approximation	$\sin(0.01) \approx 0.01$, $x \approx y$ means x is approximately equal to y
$>$	strict inequality	greater than	$5 > 4$ 5 is greater than 4
$<$	strict inequality	less than	$4 < 5$ 4 is less than 5
\geq	Inequality	greater than or equal to	$5 \geq 4$, $x \geq y$ means x is greater than or equal to y
\leq	Inequality	less than or equal to	$4 \leq 5$, $x \leq y$ means x is less than or equal to y
()	parentheses	calculate expression inside first	$2 \times (3+5) = 16$
[]	Brackets	calculate expression inside first	$[(1+2) \times (1+5)] = 18$
+	Plus sign	addition	$1 + 1 = 2$
-	Minus sign	subtraction	$2 - 1 = 1$
\pm	plus – minus	both plus and minus operations	$3 \pm 5 = 8$ or -2

Symbol	Symbol Name	Meaning / definition	Example
\pm	minus – plus	both minus and plus operations	$3 \mp 5 = -2 \text{ or } 8$
*	Asterisk	multiplication	$2 * 3 = 6$
\times	Times sign	multiplication	$2 \times 3 = 6$
.	Multiplication dot	multiplication	$2 \cdot 3 = 6$
\div	Division sign	division	$6 \div 2 = 3$
/	Division slash	division	$6 / 2 = 3$
—	Horizontal line	division / fraction	$\frac{6}{2} = 3$
mod	Modulo	remainder calculation	$7 \bmod 2 = 1$
.	Period	decimal point, decimal separator	$2.56 = 2 + 56/100$
a^b	Power	exponent	$2^3 = 8$
$a^{\wedge}b$	Caret	exponent	$2^{\wedge}3 = 8$
\sqrt{a}	square root	$\sqrt{a} \cdot \sqrt{a} = a$	$\sqrt{9} = \pm 3$
$\sqrt[3]{a}$	cube root	$\sqrt[3]{a} \cdot \sqrt[3]{a} \cdot \sqrt[3]{a} = a$	$\sqrt[3]{8} = 2$
$\sqrt[4]{a}$	fourth root	$\sqrt[4]{a} \cdot \sqrt[4]{a} \cdot \sqrt[4]{a} \cdot \sqrt[4]{a} = a$	$\sqrt[4]{16} = \pm 2$
$\sqrt[n]{a}$	n-th root (radical)		for $n=3$, $\sqrt[n]{8} = 2$
%	Percent	$1\% = 1/100$	$10\% \times 30 = 3$
‰	Per-mille	$1\text{‰} = 1/1000 = 0.1\%$	$10\text{‰} \times 30 = 0.3$
Ppm	Per-million	$1\text{ppm} = 1/1000000$	$10\text{ppm} \times 30 = 0.0003$

Symbol	Symbol Name	Meaning / definition	Example
Ppb	per-billion	1ppb = 1/1000000000	10ppb \times 30 = 3×10^{-7}
Ppt	per-trillion	1ppt = 10^{-12}	10ppt \times 30 = 3×10^{-10}

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