

# PHP Math Functions

[< Previous](#)[Next >](#)

## PHP Math Introduction

The math functions can handle values within the range of integer and float types.

## Installation

The PHP math functions are part of the PHP core. No installation is required to use these functions.

## PHP Math Functions

Function	Description
<a href="#"><u>abs()</u></a>	Returns the absolute (positive) value of a number
<a href="#"><u>acos()</u></a>	Returns the arc cosine of a number
<a href="#"><u>acosh()</u></a>	Returns the inverse hyperbolic cosine of a number
<a href="#"><u>asin()</u></a>	Returns the arc sine of a number
<a href="#"><u>asinh()</u></a>	Returns the inverse hyperbolic sine of a number
<input type="checkbox"/> Dark mode	

<u>atan2()</u>	Returns the arc tangent of two variables x and y
<u>atanh()</u>	Returns the inverse hyperbolic tangent of a number
<u>base_convert()</u>	Converts a number from one number base to another
<u>bindec()</u>	Converts a binary number to a decimal number
<u>ceil()</u>	Rounds a number up to the nearest integer
<u>cos()</u>	Returns the cosine of a number
<u>cosh()</u>	Returns the hyperbolic cosine of a number
<u>decbin()</u>	Converts a decimal number to a binary number
<u>dechex()</u>	Converts a decimal number to a hexadecimal number
<u>decoct()</u>	Converts a decimal number to an octal number
<u>deg2rad()</u>	Converts a degree value to a radian value
<u>exp()</u>	Calculates the exponent of e
<u>expm1()</u>	Returns $\exp(x) - 1$
<u>floor()</u>	Rounds a number down to the nearest integer
<u>fmod()</u>	Returns the remainder of x/y
<u>getrandmax()</u>	Returns the largest possible value returned by rand()
<u>hexdec()</u>	Converts a hexadecimal number to a decimal number
<u>hypot()</u>	Calculates the hypotenuse of a right-angle triangle
<u>intdiv()</u>	Performs integer division
<u>is_finite()</u>	Checks whether a value is finite or not
<u>is_infinite()</u>	Checks whether a value is infinite or not
<u>is_nan()</u>	Checks whether a value is 'not-a-number'
<u>lcg_value()</u>	Returns a pseudo random number in a range between 0 and 1
<u>log()</u>	Returns the natural logarithm of a number
<u>log10()</u>	Returns the base-10 logarithm of a number
<u>log1p()</u>	Returns $\log(1+\text{number})$

Several specified values	
<u><a href="#">min()</a></u>	Returns the lowest value in an array, or the lowest value of several specified values
<u><a href="#">mt_getrandmax()</a></u>	Returns the largest possible value returned by mt_rand()
<u><a href="#">mt_rand()</a></u>	Generates a random integer using Mersenne Twister algorithm
<u><a href="#">mt_srand()</a></u>	Seeds the Mersenne Twister random number generator
<u><a href="#">octdec()</a></u>	Converts an octal number to a decimal number
<u><a href="#">pi()</a></u>	Returns the value of PI
<u><a href="#">pow()</a></u>	Returns x raised to the power of y
<u><a href="#">rad2deg()</a></u>	Converts a radian value to a degree value
<u><a href="#">rand()</a></u>	Generates a random integer
<u><a href="#">round()</a></u>	Rounds a floating-point number
<u><a href="#">sin()</a></u>	Returns the sine of a number
<u><a href="#">sinh()</a></u>	Returns the hyperbolic sine of a number
<u><a href="#">sqrt()</a></u>	Returns the square root of a number
<u><a href="#">srand()</a></u>	Seeds the random number generator
<u><a href="#">tan()</a></u>	Returns the tangent of a number
<u><a href="#">tanh()</a></u>	Returns the hyperbolic tangent of a number

ADVERTISEMENT



HTML

CSS



Constant	Value	Description
INF	INF	The infinite
M_E	2.7182818284590452354	Returns e
M_EULER	0.57721566490153286061	Returns Euler constant
M_LNPI	1.14472988584940017414	Returns the natural logarithm of PI: $\log_e(\pi)$
M_LN2	0.69314718055994530942	Returns the natural logarithm of 2: $\log_e 2$
M_LN10	2.30258509299404568402	Returns the natural logarithm of 10: $\log_e 10$
M_LOG2E	1.4426950408889634074	Returns the base-2 logarithm of E: $\log_2 e$
M_LOG10E	0.43429448190325182765	Returns the base-10 logarithm of E: $\log_{10} e$
M_PI	3.14159265358979323846	Returns Pi
M_PI_2	1.57079632679489661923	Returns $\pi/2$
M_PI_4	0.78539816339744830962	Returns $\pi/4$
M_1_PI	0.31830988618379067154	Returns $1/\pi$
M_2_PI	0.63661977236758134308	Returns $2/\pi$
M_SQRTPI	1.77245385090551602729	Returns the square root of PI: $\sqrt{\pi}$
M_2_SQRTPI	1.12837916709551257390	Returns $2/\text{square root of PI}$ : $2/\sqrt{\pi}$
M_SQRT1_2	0.70710678118654752440	Returns the square root of $1/2$ : $1/\sqrt{2}$
M_SQRT2	1.41421356237309504880	Returns the square root of 2: $\sqrt{2}$
M_SQRT3	1.73205080756887729352	Returns the square root of 3: $\sqrt{3}$

☐ Dark mode

PHP_ROUND_HALF_UP	1	Round halves up
PHP_ROUND_HALF_DOWN	2	Round halves down
PHP_ROUND_HALF_EVEN	3	Round halves to even numbers
PHP_ROUND_HALF_ODD	4	Round halves to odd numbers

[< Previous](#)[Next >](#)

## ADVERTISEMENT



## COLOR PICKER

☐ Dark mode

by completing  
a PHP  
course today!



Get started

### Visual Learner?



Be taught by an instructor through our video tutorial!

**WATCH NOW**



ADVERTISEMENT

Report Error

Spaces

Upgrade

Newsletter

Get Certified

Top Tutorials

- HTML Tutorial
- CSS Tutorial
- JavaScript Tutorial
- How To Tutorial
- SQL Tutorial
- Python Tutorial
- W3.CSS Tutorial
- Bootstrap Tutorial
- PHP Tutorial
- Java Tutorial
- C++ Tutorial
- jQuery Tutorial

Top References

- HTML Reference
- CSS Reference
- JavaScript Reference
- SQL Reference
- Python Reference
- W3.CSS Reference
- Bootstrap Reference
- PHP Reference
- HTML Colors
- Java Reference
- Angular Reference
- jQuery Reference

Top Examples

- HTML Examples
- CSS Examples
- JavaScript Examples
- How To Examples
- SQL Examples
- Python Examples
- W3.CSS Examples
- Bootstrap Examples
- PHP Examples
- Java Examples
- XML Examples
- jQuery Examples

☐ Dark mode

[HTML](#)[CSS](#)[HTML Certificate](#)[CSS Certificate](#)[JavaScript Certificate](#)[Front End Certificate](#)[SQL Certificate](#)[Python Certificate](#)[PHP Certificate](#)[jQuery Certificate](#)[Java Certificate](#)[C++ Certificate](#)[C# Certificate](#)[XML Certificate](#)[FORUM](#) | [ABOUT](#)

W3Schools is optimized for learning and training. Examples might be simplified to improve reading and learning. Tutorials, references, and examples are constantly reviewed to avoid errors, but we cannot warrant full correctness of all content. While using W3Schools, you agree to have read and accepted our terms of use, cookie and privacy policy.

Copyright 1999-2022 by Refsnes Data. All Rights Reserved.  
W3Schools is Powered by W3.CSS.

