

## NAME

MathUtil

## SYNOPSIS

```
use MathUtil;

use MathUtil qw(:all);
```

## DESCRIPTION

MathUtil module provides a variety of common math functions not available in core Perl package or some other useful math utilities. In order to be consistent with other Perl functions, name of all the functions in this package are in lowercase which differs from MayaChemTools naming convention for function names.

MathUtil module provides the following functions:

acos, asin, ceil, floor, log10, max, min, random, round, tan

## FUNCTIONS

## acos

```
$Value = acos($AngleInRadians);
```

Returns the nverse cosine of an angle expressed in *Radians* using Math::Trig::acos function

## asin

```
$Value = asin($AngleInRadians);
```

Returns the inverse sine of an angle expressed in *Radians* using Math::Trig::asin function

## ceil

```
$IntegerValue = ceil($Value);
```

Returns the next largest integer for *Value* using POSIX::ceil function

## floor

```
$IntegerValue = floor($Value);
```

Returns the previous smallest integer for *Value* using POSIX::floor function

## log10

```
$Log10Value = log10($Value);
```

Returns the log of *Value* using base 10

## max

```
$Number = max($Number1, $Number2);
```

Returns a Number corresponding to the maximum of *Number1* and *Number2*

## min

```
$Number = min($Number1, $Number2);
```

Returns a Number corresponding to the minimum of *Number1* and *Number2*

## random

```
$RadomNumber = random();
$RadomNumber = random($Number);
$RadomNumber = random($Number1, $Number1);
```

Returns a pseudo random number between 0 and 1, 0 and specified *Number*, or between *Number1* and *Number2*

## round

```
$RoundedValue = round($Number);
$RoundedValue = round($Number, $DecimalPlaces);
```

Returns a value corresponding to a nearst ingeter for *Number* or formatted to *DecimalPlaces*

## tan

```
$Value = tan($AngleInRadians);
```

Returns the tangent of an angle expressed in *Radians*

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**SEE ALSO**

Constants.pm, ConversionsUtil.pm

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