



Java Math Methods

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The Java Math class has many methods that allows you to perform mathematical tasks on numbers.

All Math Methods

A list of all Math methods can be found in the table below:

| Method | Description | Return Type |
|----------------|--|-----------------------|
| <u>abs(x)</u> | Returns the absolute value of x | double float int long |
| <u>acos(x)</u> | Returns the arccosine of x, in radians | double |
| <u>asin(x)</u> | Returns the arcsine of x, in radians | double |
| atan(x) | Returns the arctangent of x as a numeric value between -PI/2 and PI/2 radians | double |
| atan2(y,x) | Returns the angle theta from the conversion of rectangular coordinates (x, y) to polar coordinates (r, theta). | double |
| cbrt(x) | Returns the cube root of x | double |
| ceil(x) | Returns the value of x rounded up to its | double |

| | | |
|---------------------|--|-----------------------|
| | nearest integer | |
| copySign(x, y) | Returns the first floating point x with the sign of the second floating point y | double |
| cos(x) | Returns the cosine of x (x is in radians) | double |
| cosh(x) | Returns the hyperbolic cosine of a double value | double |
| exp(x) | Returns the value of E^x | double |
| expm1(x) | Returns $e^x - 1$ | double |
| floor(x) | Returns the value of x rounded down to its nearest integer | double |
| getExponent(x) | Returns the unbiased exponent used in x | int |
| hypot(x, y) | Returns $\sqrt{x^2 + y^2}$ without intermediate overflow or underflow | double |
| IEEEremainder(x, y) | Computes the remainder operation on x and y as prescribed by the IEEE 754 standard | double |
| log(x) | Returns the natural logarithm (base E) of x | double |
| log10(x) | Returns the base 10 logarithm of x | double |
| log1p(x) | Returns the natural logarithm (base E) of the sum of x and 1 | double |
| max(x, y) | Returns the number with the highest value | double float int long |
| min(x, y) | Returns the number with the lowest value | double float int long |
| nextAfter(x, y) | Returns the floating point number adjacent to x in the direction of y | double float |
| nextUp(x) | Returns the floating point value adjacent to x in the direction of positive infinity | double float |
| pow(x, y) | Returns the value of x to the power of y | double |
| random() | Returns a random number between 0 and 1 | double |

| | | |
|---------------------------|--|--------------|
| <code>round(x)</code> | Returns the value of x rounded to its nearest integer | int |
| <code>rint(x)</code> | Returns the double value that is closest to x and equal to a mathematical integer | double |
| <code>signum(x)</code> | Returns the sign of x | double |
| <code>sin(x)</code> | Returns the sine of x (x is in radians) | double |
| <code>sinh(x)</code> | Returns the hyperbolic sine of a double value | double |
| <code>sqrt(x)</code> | Returns the square root of x | double |
| <code>tan(x)</code> | Returns the tangent of an angle | double |
| <code>tanh(x)</code> | Returns the hyperbolic tangent of a double value | double |
| <code>toDegrees(x)</code> | Converts an angle measured in radians to an approx. equivalent angle measured in degrees | double |
| <code>toRadians(x)</code> | Converts an angle measured in degrees to an approx. angle measured in radians | double |
| <code>ulp(x)</code> | Returns the size of the unit of least precision (ulp) of x | double float |

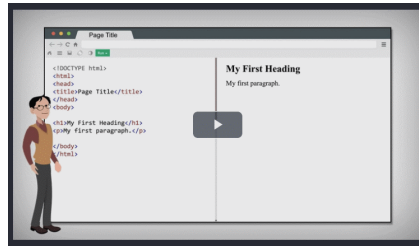
Note: All Math methods are `static`.

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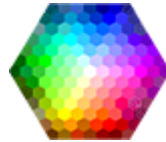
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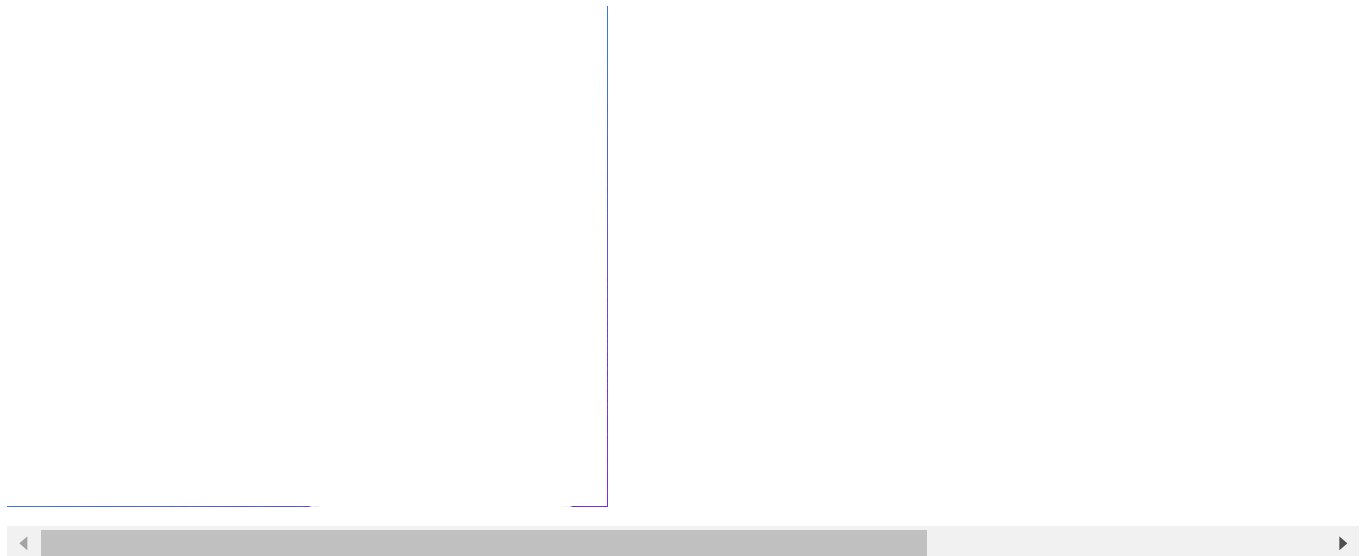


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