

Math Methods

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Updated March 2019



Before We Begin

- Make sure you have Java & Java JDK downloaded on your computer
 - can run **java -version** in terminal to check
- Make sure you have IntelliJ downloaded on your computer
- *Suggested:* Watch previous Java tutorials

The Math Class

the Math class is a **static** class with methods in it that do many calculations for you.

static classes are used like `ClassName.methodName(params)`

Math Methods 1

Method Definition	Description
<code>Math.abs(value)</code>	absolute value
<code>Math.ceil(value)</code>	moves up to ceiling
<code>Math.floor(value)</code>	moves down to floor
<code>Math.log10(value)</code>	logarithm, base 10
<code>Math.max(value1, value2)</code>	larger of two values
<code>Math.min(value1, value2)</code>	smaller of two values
<code>Math.pow(base, exp)</code>	base to the exp power

Math Methods 2

Method Definition	Description
Math.random()	random double between 0 and 1
Math.round(value)	nearest whole number
Math.sqrt(value)	square root
Math.sin(value) Math.cos(value) Math.tan(value)	sine/cosine/tangent of an angle in radians
Math.toDegrees(value) Math.toRadians(value)	convert degrees to radians and back

Constants

Some classes have constants associated with them. Constants are variables that have set values and can be used to prevent “magic numbers” in your code.

Math class constants:

Constant	Value
Math.E	2.7182818...
Math.PI	3.1415926...

Math Method Practice

Write the following methods:

- Return the circumference of a circle (`Math.PI`)
- Return a random number between 2 given values (`Math.random`)
- Return the max of 3 numbers (`Math.max`)

Note: the methods will have return values and parameters

The End