

Math.random

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Java

So far, we've used the Random library

Time to change it up!

So the Random library isn't quite usable on the AP Exam

```
import random;  
Random rand = new Random();  
int x = rand.nextInt(5);           // # between 0-5 not inclusive  
double y = rand.nextDouble();     // # between 0-1
```

Sadly can't use this anymore :(

Math.random

We don't need to import anything to use it!

```
Math.random(); // # between 0-1
```

This is just like our nextDouble()!

So how do we make random integers?

We treat `Math.random()` as a percentage!

```
Math.random()*10;
```

```
// decimal # between 0-10 not including 10
```

`Math.random()` gives some decimal number between 0 and 1.

If we multiply that by 10.

It's like $0.25 * 10 = 2.5$

Or $0.612 * 10 = 6.12$

Making it an integer - Introducing Math.floor()

Math.floor() returns the largest integer from the number given

```
Math.floor(Math.random()*10);
```

```
// integer # between 0-10 not including 10
```

Lab - Math.random()

1. Redo the Random Lab 009
2. Create 4 random numbers and output them
 - a. A number between 0 and 9
 - b. A number between 1 and 100
 - c. A number between 2.5 and 3.5
 - d. A double between 14 and 589