

Examples:

```
int x = 5;  
int y = 6;  
y += x;  
System.out.println(y); //11  
System.out.println(x); //5
```

```
int x = -5;  
int y = 6;  
int val = Math.min(x, y);  
System.out.println(val); //-5  
System.out.println(y); //6
```

```
int x = -5;  
int y = 6;  
x++;  
y--;  
System.out.println(x+":"+y); //-4:5
```

```
int value = (int)(Math.random() * 6) + 4;  
System.out.println(value); //4, 5, 6, 7, 8, or 9  
//notice that it starts at 4 and there are 6 values...
```

```
double x = Math.random();  
System.out.println(value); //Between 0.0 and 1.0  
//Includes 0.0, will NOT ever equal 1.0!
```

Evaluate the following expressions

1) `Math.max(4, 6)`

**6**

2) `Math.abs(2)`

**2**

3) `Math.pow(2,4)`

**16.0**

4) `Math.max(4, Math.abs(-5))`

**5**

5) `Math.min(2, Math.min(1, 4))`

**1**

6) `Math.sqrt(25)`

**5.0**

Indicate the range of random values that can be generated by these lines of code

7) `(int)(Math.random() * 4) + 6`

**{6, 7, 8, 9}**

8) `(int)(Math.random() * 5) - 4`

**{-4, -3, -2, -1, 0}**

9) `(int)(Math.random() * 6) + 1`

**{1, 2, 3, 4, 5, 6}**

10) `Math.random() * 5`

**[0, 5)**

11) Tricky: `(int)Math.random() * 5 + 3`

**3**

12) Tricky: `2*(int)(Math.random()*3)+1`

**{1, 3, 5}**

Write the expressions that will generate the ranges of random values. For 16-18, the first number is included in the range, and the second number is excluded.

13) {3, 4, 5, 6}

**`(int)(Math.random()*4) + 3`**

14) {-2, -1, 0, 1, 2, 3}

**`(int)(Math.random()*6) - 2`**

15) {0, 1, 2}

**`(int)(Math.random()*3)`**

16) 0.0 to 7.0

**`Math.random()*7`**

17) 2.0 to 8.0

**`Math.random()*6 + 2`**

18) -3.0 to 9.0

**`Math.random()*12 - 3`**