

## Short Circuit Worksheet

1. `int x = 8;`  
`int y = 4;`  
`(x > y) && (y == 4)`

- Result: true or false?
- Short Circuit: yes or no?

2. `int x = 8;`  
`int y = 4;`  
`(x > y) || (y == 4)`

- Result: true or false?
- Short Circuit: yes or no?

3. `int x = 3;`  
`int y = 10;`  
`(y == 3) && (y < x)`

- Result: true or false?
- Short Circuit: yes or no?

4. `int x = 3;`  
`int y = 10;`  
`(y == 3) || (y < x)`

- Result: true or false?
- Short Circuit: yes or no?

	Value		Short-Circuit		
	true	false	Yes	No	
5.					<code>true    true    false</code>
6.					<code>false    false    false</code>
7.					<code>false    false    true</code>
8.					<code>true    true    true</code>
9.					<code>true &amp;&amp; true &amp;&amp; false</code>

10.					false && false && false
11.					false && false && true
12.					true && true && true

13. What two lines of output will print when this code is run? NOTE: ++x will increment x by 1, THEN check if it equals 1

```
int x = 0, y = 0, z = 0;
System.out.println( ++x == 9 || ++y == 1 && ++z == 1 );
System.out.println("x is " + x + ", y is " + y + ", z is " + z);
```

Output Line 1:

Output Line 2:

14. What two lines of output will print? This code will short circuit.

```
int x = 0, y = 0, z = 0;
System.out.println( ++x == 1 || ++y == 9 && ++z == 1 );
System.out.println("x is " + x + ", y is " + y + ", z is " + z);
```

Output Line 1:

Output Line 2:

15. What two lines of output will print? One part of this code will short circuit.

```
int x = 0, y = 0, z = 0;
System.out.println( ++x == 9 || ++y == 9 && ++z == 1 );
System.out.println("x is " + x + ", y is " + y + ", z is " + z);
```

Output Line 1:

Output Line 2: