

1. Rewrite the following one-line `if` statements fixing any compile or logic errors:

a. `if num > 0 System.out.println("hello");`

b. `if (x + 9 > Math.sqrt(Math.pow(3, 2)) num = 5;`

c. `if (num = 3) System.out.println("goodbye");`

d. `if (3 < num < 10) System.out.println("over here");`

e. `if (num > 5 || < 0) System.out.println("up there");`

f.  
`if (num > 0)`  
`if (num < 10)`  
    `System.out.println("num < 10");`  
    `System.out.println("and num > 0");`  
`else`  
    `System.out.println("num is not greater than zero");`

2. What is returned by the following segments: a positive value, negative value, or zero.

\_\_\_\_\_ a. `"Jane".compareTo("Fred");`

\_\_\_\_\_ b. `"Zebra".compareTo("apple");`

\_\_\_\_\_ c. `"IBM".compareTo("IBM");`

\_\_\_\_\_ d. `"aardvark".compareTo("apple");`

\_\_\_\_\_ e. `"java".compareTo("javadoc");`

3. What is the output of the following code segment?

```
String name = null;  
  
if (!(name.equals("Bill")))  
{  
    System.out.println("Hi Bill");  
}
```

4. Complete the truth table below to determine if `B || A && (A || B) || B` is equivalent to `A || B`

A	B	A    B	A && (A    B)	B    A && (A    B)
0	0			
0	1			
1	0			
1	1			

