

Signature _____

CSE 8B

Name _____

Quiz 1

cs8b _____

Winter 2015 Student ID _____

This quiz is to be taken **by yourself** with closed books, closed notes, no electronic devices.

(Partial) Operator Precedence Table

| Operators | | | Associativity |
|-----------|----|-------------------------|---------------|
| ! | ++ | -- (pre & post inc/dec) | right to left |
| * | / | % | left to right |
| + | - | | left to right |
| < | <= | > | left to right |
| == | != | >= | left to right |
| && | | | left to right |
| | | | left to right |
| = | | | right to left |

Using the operator precedence table above, evaluate each expression and state what gets printed.

```
int a = -1, b = 2, c = 8;
```

```
boolean exp1 = b - a != c;
```

true

(value of exp1)

```
boolean exp2 = a + b * c < a + c * b;
```

false

(value of exp2)

```
boolean exp3 = !(c + a >= b);
```

false

(value of exp3)

```
boolean exp4 = true || false && !false;
```

true

(value of exp4)

```
boolean exp5 = true && false || false;
```

false

(value of exp5)

What are the values of x, y, z (left) and a, b, c (right) after the following code segments are executed?

```
int x = 6, y = 3, z = 0;
```

```
if ( ++x > 5 && y-- > 3 )
```

```
    z = ++x + y--;
```

```
else
```

```
    z = x++ + --y;
```

x = 8y = 1z = 8

```
int a = 8, b = 5, c = 0;
```

```
if ( --a <= 8 || b++ >= 4 )
```

```
    c = a++ + --b;
```

```
else
```

```
    c = ++a + b--;
```

a = 8b = 4c = 11

What gets printed with each of the following statements?

```
int a = 5, b = 4, c = 3;
```

```
System.out.println( a + (b + c) + " = " + (a + b) + c );
```

12 = 93

```
System.out.println( a + b + (c + " = ") + a + (b + c) );
```

93 = 57

```
System.out.println( (a + b) + c + " = " + a + b + c );
```

12 = 543

```
c = a + b;
```

```
b = 7;
```

```
System.out.println( "c = " + c );
```

c = 9

```
String s1 = "Hello";
```

```
String s2 = s1;
```

```
String s3 = new String("Hello");
```

What value is produced by evaluating the following expressions?

```
s1 == s2
```

true

```
s1 == s3
```

false

```
s2 == s3
```

false

```
s1.equals(s3)
```

true

```
s2.equals(s3)
```

true

```
s3.equals("Hello")
```

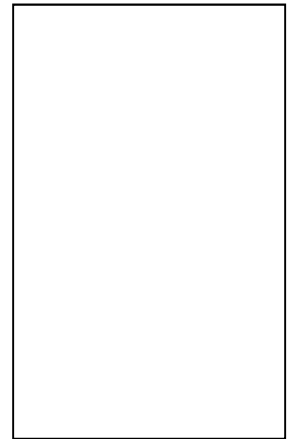
true

What gets printed when this program is run?

```
public class Loops {
    public static void main( String[] args ) {
        final int MAX = 8, MIN = 6;
        int i = -2, j = -3;

        for ( i = MAX; i > MIN; --i ) {
            j = 7;
            while ( j <= MAX ) {
                System.out.println( i + " " + j ); // space between i and j
                ++j;
            }
        }

        System.out.println( i + " " + j ); // space between i and j
    } // end main()
}
```



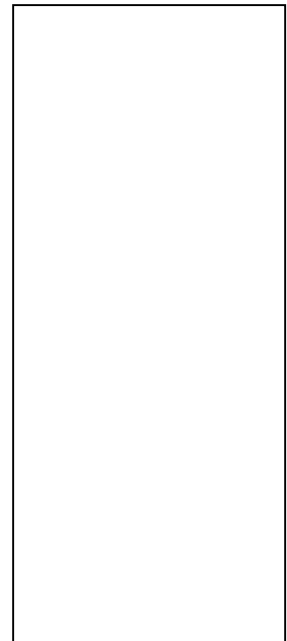
What gets printed when this program is run?

```
public class Trace {
    public static void main( String[] args ) {
        System.out.println( "main1" );
        fool();
        System.out.println( "main2" );
        foo2();
        System.out.println( "main3" );
        foo3();
    }

    public static void fool() {
        System.out.println( "A" );
        foo3();
        System.out.println( "B" );
    }

    public static void foo2() {
        System.out.println( "C" );
    }

    public static void foo3() {
        System.out.println( "D" );
        foo2();
        System.out.println( "E" );
    }
}
```



What gets printed when this program is run?

```
public class Change {
    public static void main( String[] args ) {
        int a = 7;
        int b = 13;

        change( b, a );

        System.out.println( a + " " + b ); // space between a and b
    }

    public static void change( int a, int b ) {

        System.out.println( a + " " + b ); // space between a and b

        a = 22;
        b = 44;

        System.out.println( a + " " + b ); // space between a and b
    }
}
```

