Signature _____ **CSE 11 Quiz 2 Fall 2011** **Name** _____

cs11f ____ **Student ID** _____

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

(Partial) Operator Precedence Table

Operators	Associativity
* / %	left to right
+ -	left to right
< <= > >=	left to right
== !=	left to right
&&	left to right
||	left to right
=	right to left

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

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

if ( ++x >= 4 || y-- >= 7 )
  z = ++x + y--;
else
  z = x++ + --y;
```

x =
y =
z =

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

if ( ++a >= 6 && b-- >= 9 )
  c = ++a + b--;
else
  c = a++ + --b;
```

a =
b =
c =

2) What is the equivalent Java expression for the following expression such that no `!` operators are used?

```
!( a == 4 || b > -13 )
```

_____

3) Assume we have defined `public class Test` and it uses at least one class in the objectdraw library which we have copied into the current working directory.

Write the full Unix command to compile this Java class.

_____

This command will produce a file named:

_____

Write the full Unix command to run the above program as a Java application.

_____

Assume we have correctly written a Test.html file in the same directory with the above files. Write the full Unix command to run the above program as an applet.

_____

4) Assume a program had the following definitions (a Point has an x and a y value):

```
Point p1 = new Point( 42, 420 );
Point p2 = new Point( p1 );
Point p3 = p2;
```

What results would be produced by evaluating the following expressions?

```
p1 == p2      _____________        p1 == p3      _____________        p2 == p3      _____________

p1.equals(p2) _____________        p1.equals(p3) _____________        p2.equals(p3) _____________

p1.translate(1, 1);  // Add 1 to the x and y coordinates in the Point object ref'ed by p1

p1.equals(p2) _____________        p1.equals(p3) _____________        p2.equals(p3) _____________

p2.translate(1, 1);  // Add 1 to the x and y coordinates in the Point object ref'ed by p2

p1.equals(p2) _____________        p1.equals(p3) _____________        p2.equals(p3) _____________

p3.translate(1, 1);  // Add 1 to the x and y coordinates in the Point object ref'ed by p3

p1.equals(p2) _____________        p1.equals(p3) _____________        p2.equals(p3) _____________
```

5) What output is produced with the following code fragment? Assume `method1()` is invoked as

```
Quiz2 q2 = new Quiz2();
q2.method1( 19 );
```

```
public class Quiz2
{
  private int a;                  // Line 3

  public void method1( int x )
  {
    int a;                        // Line 7
    int b = x;

    a = b % 5;
    this.a = b / 3;

    System.out.println( "a = " + a );
    System.out.println( "b = " + b );
    System.out.println( "this.a = " + this.a );
    System.out.println( "method2() result = " + method2( x ) );
    System.out.println( "a = " + a );
    System.out.println( "b = " + b );
    System.out.println( "this.a = " + this.a );  }

  private int method2( int x )
  {
    int a = x;
    int b = this.a;

    b = b * 2;

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

    this.a = b + 3;

    return a + 3;
  }
}
```

What is the initial value of `a` on Line 3? _____

What is the initial value of `a` on Line 7? _____

Output:

```
a = __________
b = __________
this.a = __________
a = __________
b = __________
this.a = __________
method2() result = __________
a = __________
b = __________
this.a = __________
```