Signature _____ **CSE 11 Quiz 2 Fall 2009** **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 is the output of this code? (Circle correct letter.)

```
public class Test1
{
  public static void main(String[] args)
  {
    int x = 1;
    if (x < 2)
      System.out.print("Hello, ");
      if (x > 1)
        System.out.print("How are you? ");
    else
      System.out.println("I am fine.");
  }
}
```

A. `Hello, I am fine.`
B. `Hello, How are you?`
C. `Hello,`
D. `How are you? I am fine.`

2) Which of the statements below is logically equivalent to the if-conditional:

```
if( !P && Q )
```

Assume for any two independent statements `P` and `Q`. (Circle correct letter.)

A. `if( !!P || Q )`
B. `if( !(P || !Q) )`
C. `if( !(P && !Q) )`
D. `if( !Q && P )`

3) What is the value of `Nag` after the assignment statement below? (Circle correct letter.)

```
double Nag = 25;
Nag = Nag + Nag * (1/5);
```

A. `25.0`
B. `30.0`
C. `10.0`
D. `None of the above or an error of some kind exists (compile time or run time)`

4) Assume a program had the following declarations:

```
Location loc1 = new Location( 2, 3 );
Location loc2 = new Location( loc1 );
Location loc3 = loc1;
```

What result would be produced by the following expressions?

```
( loc1 == loc2 )  _____________          loc1.equals( loc2 )    _____________

( loc2 == loc3 )  _____________          loc2.equals( loc3 )    _____________
```

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

```
Quiz2 q2 = new Quiz2();
q2.method1( 5 );
```

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

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

    a = b + 2;
    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( "this.a = " + this.a );
  }

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

    b = b + 3;

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

    this.a = b + 1;

    return a + 1;
  }
}
```

Output:

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

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

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