Signature _____   **CSE 11**   Name _____
Quiz 5
cs11f ____   **Fall 2013**   Student ID _____

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

Given the following class definitions:
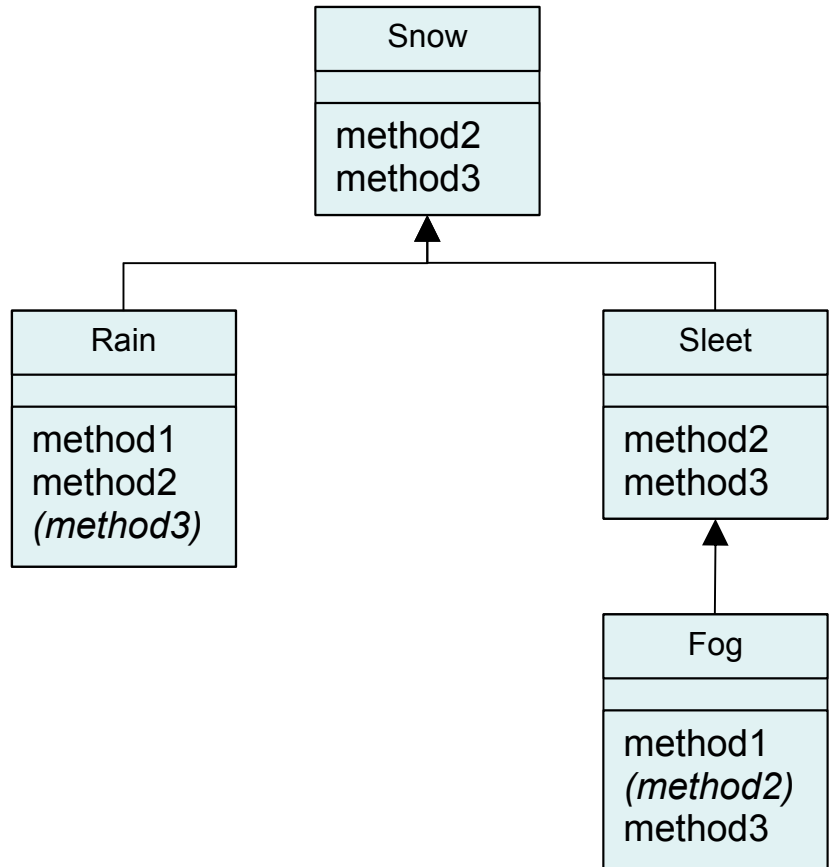
```java
public class Snow {
  public void method2() {
    System.out.println("Snow 2");
  }
  public void method3() {
    System.out.println("Snow 3");
    method2();
  }
}

public class Rain extends Snow {
  public void method1() {
    System.out.println("Rain 1");
  }
  public void method2() {
    System.out.println("Rain 2");
    super.method2();
    method1();
  }
}

public class Sleet extends Snow {
  public void method2() {
    super.method2();
    System.out.println("Sleet 2");
  }
  public void method3() {
    System.out.println("Sleet 3");
  }
}

public class Fog extends Sleet {
  public void method1() {
    System.out.println("Fog 1");
  }
  public void method3() {
    super.method3();
    System.out.println("Fog 3");
    method2();
  }
}
```

Snow
method2
method3

Rain
method1
method2
(method3)

Sleet
method2
method3

Fog
method1
(method2)
method3

Put your answer here:

What is the output given the following code:

```java
Snow var1 = new Fog();
var1.method3();
```

In Java, a(n) _____ can only declare public abstract methods and public static final constants while a(n) _____ class can have a mixture of concrete and abstract methods and instance variables.

In Java, there is only _____ inheritance of implementation denoted by the keyword _____ while you can have _____ inheritance of interface denoted by the keyword _____ .

Given the following class definitions for class Foo, class Fubar1, and class FubarTest:

```java
public class Foo
{
  public Foo()
  {
    System.out.println( "Foo ctor #1" );
  }

  public Foo( int x, int y )
  {
    this();
    System.out.println( "Foo ctor #2" );
  }

  public String toString()
  {
    System.out.println( "Foo" );
    return "Foo.toString";
  }
}
```

```java
public class FubarTest
{
  public static void main( String[] args )
  {
    Foo ref = new Fubar();

    System.out.println( "-----" );

    System.out.println( ref.toString() );
  }
}
```

```java
public class Fubar extends Foo
{
  public Fubar()
  {
    super( 42, 420 );
    System.out.println( "Fubar ctor #1" );
  }

  public Fubar( int x, int y )
  {
    System.out.println( "Fubar ctor #2" );
  }

  public String toString()
  {
    System.out.println( "Fubar" );
    return super.toString() + " " + "
           + "Fubar.toString";
  }
}
```

What is the output when we run FubarTest as in
   java FubarTest

Given the following expressions, indicate whether the expressions evaluate to true or false.

```java
String s1 = new String( "CSE 11" );
String s2 = s1;
String s3 = new String( "CSE 11" );

s3 = "CSE 11";
```

s1 == s2   _____

s1 == s3   _____

s2 == s3   _____

s1.equals(s2)   _____

s1.equals(s3)   _____

s2.equals(s3)   _____

s1 == "CSE 11"   _____

s2 == "CSE 11"   _____

s3 == "CSE 11"   _____

What question would you like to see on the Final Exam?