

## CSCI 201 Fall'07: Sample Questions for Exam 2

The exam will be composed of a subset of questions (usually 3 or 4) similar to those shown here. All exams will be closed book

### Problem 1: Reading Documentation

Below are the headers for two different methods. Beneath each header write everything you know about the method and how to use it from reading its header.

From the Math class:       double hypot(double x, double y)

From the Math class:       double cos(double angle)

### Problem 2: Definitions

- a. formal parameter
- b. actual parameter
- c. method signature
- d. local variable
- e. the call stack

### Problem 3: Loops

Indicate what will be output by each of the three programs below, if the user enters the number sequence:

1 3 6 7

a.

```
import java.util.Scanner;
public class While1
{
    public static void main (String[] args)
    {
        int tom;
        Scanner keyboard = new Scanner(System.in);
        System.out.print ("Enter an even integer: ");
        tom = keyboard.nextInt();

        while(tom % 2 == 1) {
            System.out.print ("try again to enter an even integer: " );
            tom = keyboard.nextInt();
        }
        System.out.println ("thanks---bye now");
    }
}
```

b.

```
import java.util.Scanner;
public class For
{
    public static void main (String[] args)
    {
        int tom;
        Scanner keyboard = new Scanner(System.in);
        System.out.print ("Enter an even integer: ");
        tom = keyboard.nextInt();
        for(; tom % 2 == 1; ) {
            System.out.print ("try again to enter an even integer: " );
            tom = keyboard.nextInt();
        }
        System.out.println ("thanks---bye now");
    }
}
```

c.

```
import java.util.Scanner;
public class Do
{
    public static void main (String[] args)
    {
        int tom;
        Scanner keyboard = new Scanner(System.in);
        do {
            System.out.print ("enter an even integer: " );
            tom = keyboard.nextInt();
        } while(tom % 2 == 1);

        System.out.println ("thanks---bye now");
    }
}
```

## Problem 4: Legal Code Sequences

Indicate which of the following code segments are legal

```
a. public static double fun(int num1, double num2) {
    int num1 = 1;
    double num2 = 2.0;
    if (num1 > num2)
        return num1;
    else
        return num2;
}
```

```
b. public static void fun(int num1, double num2) {
    int i = 0;
    for (int i=0; i<10; i++) {
        System.out.println(i);
    }
}
```

```
c. public static void fun(int num1, double num2) {  
    for (int i=0; i<10; i++) {  
        System.out.println(i);  
    }  
    int i = 0;  
}
```

### **Problem 5: Method Calls**

Below each method header, write a statement that would successfully call that method from another method within the same class.

a. `public static void fun(double x, double y, int z)`

b. `public static char fun (int x, char y)`

c. `public static double fun(String x)`

### **Problem 6: Writing code**

Write a segment of code to produce the following output---you do not need to write the whole program.

```
*  
***  
*****  
***  
*
```