

COSC 120 Exam Review #2
Fall 2009

1.) Write a method `xDividesY` which takes in two integer and returns a Boolean. The return value is true if `y` is a multiple of `x` and false if `y` is not a multiple of `x`.

2.) Identify the parameter(s) and local variable(s) in the following method:

```
private int factorial(int n){  
    int result =1;  
    for (int i = 1; i<=n; i++){  
        result*=i;  
    }  
    return result;  
}
```

3.) Give two examples of a control statement.

4.) Write a description of what this Java code does.

```
int counter = 10;  
for (int i=1; i <counter; i++){  
    if (i<counter)  
        System.out.println("We still have" + (counter-i) + "more loops");  
    else  
        System.out.println("This is the last loop");  
}
```

5.) Write Java code for the above example using a WHILE loop.

6.) Find the errors in the following code and explain them.

```
public void run(){  
    while(x<5{  
        System.out.println("x=" , x)  
        x--;  
    }  
}
```

7.) Give the code that will ask for a number from the user and then sum the numbers from 1 to the number provided by the user. Use a while loop for this.

8.) Give three possible correct configurations of an if statement.

9.) Give the code for the method `isEven`. Assume that you will be passing in the number to be tested as a parameter and return a boolean indicating whether or not the number was even.

10.) What is the difference between a method and a program?

11.) How do you specify that a method requires 3 integers to be passed to it?

12.) When will success be displayed in the following code?

```
if( letter == "a" || letter == "A" && (x > 5 && x < 10) ){  
    println( "success!" );  
}
```

13.) What is wrong with the following code:

```
public class test {  
    private int n1;  
  
    private int foo(int x){  
        return n1*x;  
    }  
  
    public void run() {  
        n1 = 4;  
        x = 4;  
        System.out.println("The answer is" + foo());  
    }  
}
```

14.) Given the following class definition, what methods can be called?

```
public class Student{  
    private String student_name;  
    private int id_number;  
  
    public Student(String name, int id){  
        student_name = name;  
        id_number = id;  
    }  
  
    public String toString() {  
        return (student_name + "(#" + id_number + ")");  
    }  
  
    public String getName() {  
        return student_name;  
    }  
  
    public int getID() {  
        return id_number;  
    }  
}
```

15.) What is wrong with the following code:

```
import java.util.*;

public class foo {

    private n1;
    println(n1);

    public void run() {
        Scanner input = new Scanner (System.in);
        System.out.println("Enter a number:");
        n1 = input.nextInt();

        n1 = n1*n1;
        System.out.println(n1)
    }
}
```

16.) Create a method called myRun that will get input for three integers from the user using a Scanner and then print out the result of the following method:

```
public int add3Integers (int a, int b, int c){
    return a+b+c;
}
```

Note that you'll be using the three integers that you got from the user as the parameters for add3Integers.

17.) Create the if statement(s) that will print out the largest number between three integer variables x, y and z.

18.) Create the method signature for the method add3Floats that will take three floating point numbers as parameters and return the sum of those three numbers.

19.) Create a class called myQuickCalculator with three methods: add2ints, sub2ints and mult2ints. add2ints will have two integers taken in as parameters and return the sum of those two integers. sub2ints will do the same, except subtracting the values and mult2ints will do the same, except multiplying the values.