Practice Final

**You have 60 minutes to work on the exam. Answer each question to the best of your ability. If you are stumped, or don’t know how to write a specific piece of code, use comments, or pseudo code, to describe the process or steps necessary to write the program.**

1. Which of the following is valid for casting a String, “1234” to an integer?

a. (String) "1234";

b. 1234 + "";

c. Integer.parseInt("1234");

d. (int) "1234";

1. The main method for a class is written as:

a. public void static main(String[] args)

b. public static void main(String[] args)

c. public static void Main(String[] args)

d. public static void Main(string[] args)

1. Which of the following statements is true?

a. Every comment must end with a semicolon

b. Every statement in a program must end with a semicolon

c. Every method must end with a semicolon

d. Every line in a program must end with a semicolon

1. The extension name of a Java bytecode file is?

a. .java

b. .obj

c. .exe

d. .class

1. If a program compiles fine, but it produces an incorrect result, then what type of error has occurred?

a. compilation error b. runtime error c. logic error

1. Of the following, circle the answer(s) that will give a result of 0.5.

a. 1/2

b. 1.0/2

c. (double) (1 / 2)

d. (double) 1 / 2

1. The expression, ("Java " + 1 + 2 + 3), evaluates to which of the following:?

a. Java 123

b. Java123

c. Java6

d. Java 6

1. What is the output of the following code?

double x = 5.5;

int y = (int)x;

System.out.println("x is " + x + " and y is " + y);

a. x is 5.5 and y is 5.5

b. x is 5 and y is 5.5

c. x is 5.5 and y is 5

d. x is 5 and y is 5

1. What are the values of i and j after the following method is run?

public void add() {

int j = 1;

int i = ++j + j++ \* 5;

}

a. i = 17 and j = 3

b. i = 11 and j = 3

c. i = 16 and j = 3

d. i = 12 and j = 3

1. If you enter 1, 3, 2, 1, 3, into your keyboard when you run this program, what will be the output?

import java.util.Scanner;

public class Test1 {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter five numbers: ");

double number3 = input.nextDouble();

input.nextDouble();

double number1 = input.nextDouble();

input.nextDouble();

double number2 = input.nextDouble();

// Compute average

double average = (number2 – number1 + number3 \* number1) / number2;

// Display result

System.out.println(average);

}

}

Output:­\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. Write a static method named contains that accepts two arrays of integers *a1* and *a2* as parameters and that returns a boolean value indicating whether or not *a2*'s sequence of elements appears in *a1* (true for yes, false for no). The sequence of elements in *a2* may appear anywhere in *a1* but must appear consecutively and in the same order. For example, if variables called list1 and list2 store the following values:

int[] list1 = {1, 6, 2, 1, 4, 1, 2, 1, 8};

int[] list2 = {1, 2, 1};

Then the call of contains(list1, list2) should return true because list2's sequence of values {1, 2, 1} is contained in list1 starting at index 5. If list2 had stored the values {2, 1, 2}, the call of contains(list1, list2) would return false because list1 does not contain that sequence of values. Any two lists with identical elements are considered to contain each other, so a call such as contains(list1, list1) should return true.

You may assume that both arrays passed to your method will have lengths of at least 1. You may not use any Strings to help you solve this problem, nor methods that produce Strings such as Arrays.toString.

12. Consider the following method. What are the values of the elements in array numbers[] after the following code executes?

public static void mystery3(int[] data, int x, int y) {

data[data[x]] = data[y];

data[y] = x;

}

int[] numbers = {3, 7, 1, 0, 25, 4, 18, -1, 5};

mystery3(numbers, 3, 1);

mystery3(numbers, 5, 6);

mystery3(numbers, 8, 4);

numbers[0]: \_\_\_\_\_\_\_\_\_\_\_\_

numbers[1]: \_\_\_\_\_\_\_\_\_\_\_\_

numbers[2]: \_\_\_\_\_\_\_\_\_\_\_\_

numbers[3]: \_\_\_\_\_\_\_\_\_\_\_\_

numbers[4]: \_\_\_\_\_\_\_\_\_\_\_\_

numbers[5]: \_\_\_\_\_ \_\_\_\_\_\_

numbers[6]: \_\_\_\_\_\_\_\_\_\_\_\_

numbers[7]: \_\_\_\_\_ \_\_\_\_\_\_

numbers[8]: \_\_\_\_\_\_\_\_\_\_\_\_

13. Write out the code for a Point class. Include all attributes, the constructor, the accessors and mutators, *setLocation(newX, newY)*, which sets the location of the point, a *slope(Point p2)* method, which returns the slope of two points as a double, and the toString method.