ITCS 2214 – Data Structures  
Arrays Practice Problems

**Interpret / Write Code**

1. int[] myNumbers = new int[8];

How many elements does the myNumbers array hold?

1. int[] idNumbers = new int[4];

What subscript/index number would be used to access the last element of the idNumbers array?

1. Given that there is an array named testScores, write the loop that would output all of the elements of the array, each on a separate line.
2. int[] myNumbers = new int[13];

Write the code to pass the myNumbers array to the sortArray method. The sortArray method does not return a value.

1. Write the line of code to declare and initialize an array of integer values. The array should contain 7 elements and be populated with any numbers you choose.
2. double[] familyHeights = {12.7, 33.5, 65.2, 32.3, 66.2};

Write the code to pass the 3rd element of the familyHeights array to the showValue method. The showValue method does not return a value.

1. int[] grades = {98, 56, 29, 100, 98};

Write the code necessary to calculate and output the average of the grades array.

1. Declare a two-dimensional array that holds three (3) arrays with (4) elements each.
2. Given a two-dimensional array named grid, write the nested for loop to output all of the elements.

**Free Response (18 pts each)**

1. Complete method getTotalPoints, which returns the total points of a given set of objects.

//precondition: list is a non-empty ArrayList containing Player objects.

//postcondition: returns the total of the int values stored in the points

field of the Player objects contained inside the ArrayList.

//the Player class contains method getPoints() which returns the point field

of the Player object.

public static double getTotalPoints (ArrayList list){

1. Complete method createList, which constructs an array object, generates a set of random integers in the [20..99] range, stores these integers in the array, and returns the array.

//precondition: n > 0.

//postcondition: returns an array object with n int values. Each value is

between 20 and 99 inclusive.

//You will need to use the nextInt(n) method of the Random class, which //returns a random number between 0 and n-1, inclusive.

public static int[] createList (int n){

Random rand = new Random();