

Name(s): _____

Consider the code provided to do the following activities.

```
import java.util.Arrays;
import java.util.Scanner;

public class ArrayInts {
    private Scanner in;
    private int [] array;

    public ArrayInts(int length){
        in = new Scanner(System.in);
        array = new int[length];
    }
    public void readArray(){
        for(int i = 0; i < array.length; i++){
            System.out.println("Enter and integer number: ");
            int value = in.nextInt();
            array[i] = value;
        }
    }

    public String toString(){
        return Arrays.toString(array);
    }
}
```

```
public class AppsArrayInt {
    public static void main(String args[]){
        ArrayInts obj = new ArrayInts(8);
        obj.readArray();
        System.out.println(obj);
    }
}
```

1. Regarding class ArrayInts:
 - a. Does it store any value? If yes, what are their types? Are they instance or class variables?
 - b. Explain what each method does.
2. Regarding class AppArrayInts:
 - a. Does it store any value? If yes, what are their types? Are they instance or class variables?
 - b. Explain what each method does.
3. Write a method that invert the elements in the array. What class should you implement this method?

4. Write a method that returns a String containing the maximum value in the array and its position. What class should you implement this method?
5. Call the methods you wrote in the AppArrayInts class.

Considering the class Shape provided below:

```
public class Shape {
    protected int sides;
    private String color;

    public Shape(int sides, String color){
        this.sides = sides;
        this.color = color;
    }
    public int getSides(){
        return sides;
    }
    public String getColor(){
        return color;
    }
    public String toString(){
        return "Sides: " + sides + " Color: " + color;
    }
}
```

6. Write a class ArrayShape that manipulate an array of Shape type. You should be able to create the array of Shape, include objects in the array and print all the elements that you have in the array. Use the the ArrayInts class as a template for you to follow.