

Name: _____

Section: _____

Quiz #10

1. (5 points) Arrange the following complexity “categories” from best (fastest) to worst (slowest).
[Rewrite them in a row from left to right.]

$O(n^2)$

$O(n!)$

$O(n)$

$O(1)$

$O(\log n)$

$O(2^n)$

2. (5 points) Suppose you are comparing two algorithms, X and Y. You determine that X has a running time that is $O(n)$ while Y has a running time that is $O(n^2)$. Which of the following is true? (Circle one.)
- a. X is faster than Y for any set of data.
 - b. X is faster than Y for sufficiently large sets of data.
 - c. X is faster than Y for sufficiently small sets of data.
 - d. There is not enough information to conclude any of the above.
3. [5 points] Using a single statement, declare a variable called x, which represents an ArrayList that can hold String references, and assign an empty ArrayList to your variable.

[More on the back page.]

4. [15 points] **Using for-each loops** (not ordinary for-loops) fill in the method below, which will print the contents of a two-dimensional ragged array on the console in the usual fashion. For example, a typical array with three rows might be printed like this:

```
5 97 6 7 4
15 7
144 0 12
```

Reminder: You must use for-each loops for this question. If you use regular loops your score will be 0.

```
public static void printArray(int[][] a) {
```