CS62: Fall 2026 | Quiz #3

Name: _____ *Score:* _____

1. For each problem below, state the best, worst, and average case big-O running time:

   a.

```
public static void mystery(ArrayList<Integer> nums){
   int count = 0;

   for( int i = 0; i < nums.size(); i++ ){
         if( nums.get(i) == 0 ){
               count++;
         }
   }
}
```

   Best: Worst: Average:

   b.

```
public static boolean mystery(ArrayList<String> l){
   int count = 0;

   for( int i = 0; i < l.size(); i++ ){
         for( int j = 0; j < l.size(); j++ ){
               if( i != j ){
                     if( l.get(i).equals(l.get(j) ){
                           return True
                     }
               }
         }
   }

   return False;
}
```

   Best: Worst: Average:

   c.

```
public static boolean mystery(int[] nums1, int[] nums2){
   nums1[0] = nums2[0];
   nums2[1] = nums1[1];
   nums1[0]++;
   nums2[1]++;

   return nums1.length == nums2.length;
}
```

   Best: Worst: Average:

2. The ArrayList class supports a number of methods that we didn't discuss explicitly in class. For each method below, state what the best, worst, and average case running times are. Assume the fastest possible implementation of the method.

   a. indexOf(Object o): Returns the index of the first occurrence of the specified element in this list, or -1 if this list does not contain the element.

      Best: Worst: Average:

   b. isEmpty(): Returns true if this list contains no elements.

      Best: Worst: Average:

   c. remove(int index): removes the element at the specified position in this list.

      Best: Worst: Average:

   d. removeRange(int fromIndex, int toIndex): Removes from this list all of the elements whose index is between fromIndex, inclusive, and toIndex, exclusive.

      Best: Worst: Average:

   e. Add(int index, E element): Inserts the specified element at the specified position in this list.

      Best: Worst: Average: