```
class Sort1 {
  public static boolean isSorted1(int[] arr) {
    for(int i = 0; i < arr.length - 1; i += 1) {
      if(arr[i] > arr[i + 1]) { return false; }
    }
    return true;
}
```

```
class Sort2 {
  public static boolean isSorted2(int[] arr) {
    for(int i = 0; i < arr.length; i += 1) {
      for(int j = i + 1; j < arr.length; j += 1) {
        if(arr[i] > arr[j]) { return false; }
      }
    }
  return true;
}
```

## time (ms) vs. # elements, sorted

```
250

200

200

150

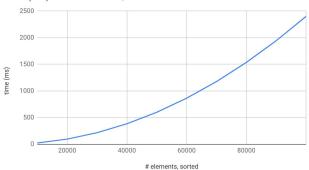
100

50

2000000 400000 600000 8000000

# elements exted
```

time (ms) vs. # elements, sorted



```
// # of times evaluated
boolean isSorted1(int[] arr) {
                                                       // in sorted order
                                                                                      unordered at index k, k+1
  for(int i = 0;
                                                       //
      i < arr.length - 1;
                                                       //
      i += 1) {
                                                       //
    if(arr[i] > arr[i + 1]) {
                                                       //
      return false;
                                                       //
                                                       //
  return true;
}
```

```
boolean isSorted2(int[] arr) {
                                                          // # of times evaluated
                                                          // in sorted order
                                                                                           unordered at index k, k+1
  for(int i = 0;
                                                          //
      i < arr.length;</pre>
                                                          //
      i += 1) {
                                                          //
    for(int j = i + 1;
                                                          //
        j < arr.length;</pre>
                                                          //
        j += 1) {
                                                          //
      if(arr[i] > arr[j]) {
                                                          //
        return false;
                                                          //
      }
    }
                                                          //
  return true;
```

```
boolean find( String[] theList, String toFind ) {
                                                      // # of times evaluated
                                                      // toFind NOT FOUND
                                                                               toFind FIRST
                                                                                                  toFind at index k
    for ( int i = 0;
                                                      //
          i < theList.length;</pre>
                                                      //
          i += 1 ) {
                                                      //
        if ( theList[i].equals( toFind )) {
                                                      //
            return true;
                                                      //
                                                      //
    return false;
}
boolean find( String[] theList, String toFind ) {
                                                      // # of times evaluated
                                                      // toFind NOT FOUND
                                                                               toFind FIRST
                                                                                                 toFind at index k
    boolean found = false;
                                                      //
    for ( int i = 0;
                                                      //
          i < theList.length;</pre>
                                                      //
          i += 1 ) {
                                                      //
        if ( theList[i].equals( toFind )) {
                                                      //
            found = true;
                                                      //
                                                      //
    return found;
}
```