Feedback — Interview Questions: Elementary Sorts

You submitted this homework on **Sun 24 Mar 2013 2:22 PM PDT -0700**. You will be able to view your score after the deadline passes.

These interview questions are for your own enrichment and are not assessed. If you click the *Submit Answers* button, you will get a hint.

Question 1

Intersection of two sets. Given two arrays `a[]` and `b[]`, each containing N distinct points in the plane, design a subquadratic algorithm to determine how many points are contained in both arrays.

Your Answer	Score	Explanation
Total	0.00 / 0.00	

Question Explanation

Hint: shellsort.

Question 2

Permutation. Given two integer arrays of size N, design a subquadratic algorithm to determine whether one is a permutation of the other. That is, do they contain exactly the same entries but, possibly, in a different order.

Your Answer	Score	Explanation
Total	0.00 / 0.00	

Question Explanation

Hint: sort both arrays.

Question 3

Dutch national flag. Given an array of N buckets, each containing a red, white, or blue pebble, sort them by color. The allowed operations are:

- $swap(i, j)$: swap the pebble in bucket i with the pebble in bucket j.
- $color(i)$: color of pebble in bucket i.

The performance requirements are as follows:

- At most N calls to $color()$.
- At most N calls to $swap()$.
- Constant extra space.

Your Answer	Score	Explanation
Total	0.00 / 0.00	