

# Breaking the Records



Maria plays  $n$  games of college basketball in a season. Because she wants to go pro, she tracks her points scored per game sequentially in an array defined as  $score = [s_0, s_1, \dots, s_{n-1}]$ . After each game  $i$ , she checks to see if score  $s_i$  breaks her record for most or least points scored so far during that season.

Given Maria's array of **scores** for a season of  $n$  games, find and print the number of times she breaks her record for *most* and *least* points scored during the season.

**Note:** Assume her records for most and least points at the start of the season are the number of points scored during the first game of the season.

## Input Format

The first line contains an integer denoting  $n$  (the number of games).

The second line contains  $n$  space-separated integers describing the respective values of  $s_0, s_1, \dots, s_{n-1}$ .

## Constraints

- $1 \leq n \leq 1000$
- $0 \leq s_i \leq 10^8$

## Output Format

Print two space-separated integers describing the respective numbers of times her best (highest) score increased and her worst (lowest) score decreased.

## Sample Input 0

```
9
10 5 20 20 4 5 2 25 1
```

## Sample Output 0

```
2 4
```

## Explanation 0

The diagram below depicts the number of times Maria broke her best and worst records throughout the season:

Game	0	1	2	3	4	5	6	7	8
Score	10	5	20	20	4	5	2	25	1
Highest Score	10	10	20	20	20	20	20	25	25
Lowest Score	10	5	5	5	4	4	2	2	1

She broke her best record twice (after games **2** and **7**) and her worst record four times (after games **1**, **4**, **6**, and **8**), so we print **2 4** as our answer. Note that she *did not* break her record for best score during game **3**, as her score during that game was *not* strictly greater than her best record at the time.

## Sample Input 1

```
10
3 4 21 36 10 28 35 5 24 42
```

Sample Output 1

4 0

Explanation 1

The diagram below depicts the number of times Maria broke her best and worst records throughout the season:

Game	0	1	2	3	4	5	6	7	8	9
Score	3	4	21	36	10	28	35	5	24	42
Highest Score	3	4	21	36	36	36	36	36	36	42
Lowest Score	3	3	3	3	3	3	3	3	3	3

She broke her best record four times (after games **1**, **2**, **3**, and **9**) and her worst record zero times (no score during the season was lower than the one she earned during her first game), so we print **4 0** as our answer.