

IOITC 2022 TST 3

Add Subtract Equalize

You have an array A of length N . You can apply the following operations at most 1000 times.

- Choose any subsequence $S = \{A_{i_1}, A_{i_2}, \dots, A_{i_x}\}$ and choose any element A_{i_k} belonging to S and either add it to all the elements of S or subtract it from all the elements of S .

You are required to make all the elements of the array equal. At every moment, all the values are required to lie in the range $[-10^{18}, 10^{18}]$, otherwise you will get WA verdict.

Note - Scoring is based on the number of operations used. Please refer to the scoring section.

Input

- The first line contains a single integer N denoting the length of array A .
- Second line contains N space separated integers A_1, A_2, \dots, A_N - denoting the array A .

Output

- On the first line, output Q denoting the number of operations you are going to perform.

Description of the next Q lines follow:

- On the first line, output x denoting the number of elements in the subsequence.
- On the second line, output x space-separated integers denoting the indices of the selected subsequence.
- On the third line, Output $+k$ or $-k$ where k denotes the index of the element chosen in the subsequence.

Test Data and Scoring

In all inputs,

- $2 \leq N \leq 1000$.
- $0 \leq A_i \leq 10^5$

Let Q denote the number of operations performed.

Scoring 1 (10 Points): $Q \leq 1000$

Scoring 2 (30 Points): $Q \leq 700$

Scoring 3 (60 Points): $Q \leq 400$

Scoring 4 (100 Points): $Q \leq 100$

Sample Input 1

```
4
1 2 3 4
```

Sample Output 1

```
2
2
1 3
+ 1
2
1 2
+ 1
```

Sample Input 2

```
3
2 8 4
```

Sample Output 2

```
2
1
1
+ 1
2
1 3
+ 3
```

Limits

Time: 1 second

Memory: 256 MB