

## Problem C - Sumsets

Given  $S$ , a set of integers, find the largest  $d$  such that  $a + b + c = d$  where  $a$ ,  $b$ ,  $c$ , and  $d$  are distinct elements of  $S$ .

### Input

Several  $S$ , each consisting of a line containing an integer  $1 \leq n \leq 1000$  indicating the number of elements in  $S$ , followed by the elements of  $S$ , one per line. Each element of  $S$  is a distinct integer between  $-536870912$  and  $+536870911$  inclusive. The last line of input contains 0.

### Output

For each  $S$ , a single line containing  $d$ , or a single line containing "no solution".

### Sample Input

```
5
2
3
5
7
12
5
2
16
64
256
1024
0
```

### Output for Sample Input

```
12
no solution
```