ÇOCUKLAR

Problem

Irmak, Sema and Fatma are daughters of Ali Rıza Bey. One day, Ali Rıza Bey brings a new board game home. In the game there is one game master and three competitors. Ali Rıza Bey becomes the game master and his daughters become competitors. Game is simple. Game master selects any number of integers and reads them loud. Competitors must choose 4 distinct integers a,b,c,d such that a+b+c=d. The one, who can generate the biggest d, wins the game.

Irmak, who is more familiar to computer stuff, logs in to Udemy Support Center and she asks: "Guys, how can I do this?".

Eşref the Superman, who works at Udemy, says "wtf.why?". Since, he had nothing else to do, he decides to give it a shot, says "why not?".

What you are asked to do, as Eşref, to write this program and print the biggest d that can be generated.

Input

Input contains several cases.

In each case, the first line contains the number of numbers that Ali Rıza Bey selected. (N)

In the next N lines, the numbers that Ali Rıza Bey selected are given, one at each line. All numbers are between -550000000 and 550000000.

The end of the input is signalled by N=0.

1 <= TEST_COUNT <= 18

1 <= N <= 700

Output

For each case, output the biggest d that satisfies a+b+c=d where a,b,c,d are distinct and in the set that Ali Rıza Bey selected.

If there is no solution that satisfies the above property, print "no solution".

4
1
2
3
5
10
130
20
30
50
60
17
270
120
10
150
0

no solution
270

C/C++/Java: 5 secs, Python: 10 secs