Thom doesn't like maths, so he always tries to do his math homework first. His last homework was to find the number of ways we can add 3 non-negative integer such that thier sum is N.

$$a + b + c = N$$

Thom had already done his homework, but since he is a bit messy; he mixed the answers and now he doesn't know to which N belongs. Help Thom to find which N belong to his answers, consider that Tom is not good at math so he may have found wrong answers.

Input

The first line contains a single integer T $(1 \leq T \leq 10000)$ and then T lines follows, each one contains an integer S $(3 \leq S \leq 50000000)$ that represent the answer of Thom.

Output

For each test case, your program must print the value of N if Thom's answer was correct otherwise print 'No solution'

Sample Input

```
10
3
14
63
8
91
102
153
30
300
3440
```

Sample Output

```
1
No solution
No solution
No solution
12
No solution
16
No solution
23
No solution
```