

6637 Lunch Time

The campus of Nanjing University of Science and Technology can be viewed as a graph with N vertices and M directed edges (vertices are numbered from 0 to $N - 1$). Each edge has the same length 1. Every day, there are K students walking to the dining-hall (vertex $N - 1$) from the teaching building (vertex 0) at lunch time. They all want reach the dining-hall as soon as possible. However, each edge can only serve at most c_i students at any time. Can you make arrangements for students, so that the last student can reach the dining-hall as soon as possible? (It is assumed that the speed of the students is 1 edge per unit time)

Input

There are several test cases, please process till EOF.

The first line of each test case contains three integer N ($2 \leq N \leq 2500$), M ($0 \leq M \leq 5000$), K ($0 \leq K \leq 10^9$). Then follows M lines, each line has three numbers a_i, b_i, c_i ($0 \leq c_i \leq 20$), means there is an edge from vertex a_i to b_i with the capacity c_i .

Output

For each test case, print an integer represents the minimum time. If the requirements can not be met, print 'No solution' (without quotes) instead.

Sample Input

```
5 6 4
0 1 2
0 3 1
1 2 1
2 3 1
1 4 1
3 4 2
3 3 10
0 1 1
1 2 1
0 2 1
2 0 1
```

Sample Output

```
36
No solution
```