Problem Description

There are N network nodes, labelled 1 to N.
You are given a list of signal travel times as directed edges times[i] = (u, v, w), where u is the source node, v is the target node, and w is the time it takes for a signal to travel from source to target.
Now, we transmit a signal from a certain node K. How long will it take for all nodes to receive the signal? If it is impossible, return -1.

Input format

First line contains two space separated integers N and E, where N represents the number of network nodes and E represents the number of connections between the nodes, respectively.
Next E lines contain three space separated integers U,V and W, where U is the source node number, V is the target node number and W is the time taken for the signal to go from node U to node V. (Nodes are numbered from 1 to N)
Next line contains an integer K, which is the node from which the signal is generated.

Output format

Print the overall time taken for the signal to reach all nodes.

Constraints

N <= 500
E <= min(N*(N-1),100000)
W <= 1000000 (10^6)
1 <= U,V <= N

Sample Input 1

```
4 6
1 2 3
1 3 5
3 1 2
2 3 1
3 4 2
4 1 2
1
```

Sample Output 1

```
6
```

Explanation 1

In the given graph, the time required by the signal to reach node 1,2,3,4 will be 0,3,4,6 respectively.