The Skelly Gang

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

The Skelly Gang is a group of notorious bushrangers. They operate in a country with n towns and m two-way roads each connecting a pair of towns. They have identified a well-hidden spot on one particular road, where they can stake out the travellers and rob them very easily. However, this plan will only work if travellers actually use the road!

Each road has a maintenance cost, and due to budget cuts, the government has decided to only maintain the cheapest selection of roads that still enables travel between all pairs of towns. If there are multiple cheapest selections of roads, the government may choose any of them.

Travellers will not use roads that are not maintained. To ensure a steady stream of stagecoaches past their hiding spot, the Skelly Gang are planning to sabotage some other roads. Any road that they sabotage will become impossible for the government to maintain. Determine the smallest number of roads that must be sabotaged to make sure that the road with the hiding spot is maintained, no matter which cheapest selection of roads the government chooses to maintain.

Input

The first line of input consists of two space-separated integers n and m ($2 \leq n \leq 3000$, $n-1 \leq m \leq 3000$), representing the number of towns and roads respectively.

m lines follow, each describing one road. The jth such line consists of three space-separated integers a_j, b_j and c_j ($1 \leq a_j < b_j \leq n$, $1 \leq c_j \leq 100,000$), representing the two towns connected by the road and the maintenance cost of the road respectively. No two roads join the same pair of towns. The first of these m lines is the road with the hiding spot. It is guaranteed that travel is possible from any town to any other town before any sabotage takes place.

Output

Display a single integer, the smallest number of roads that must be sabotaged to ensure the maintenance of the road with the hiding spot.

Scoring

For Subtask 1 (50 points):

- your answer will be judged only on whether it is zero or nonzero, i.e. all nonzero outputs will be treated as equivalent.

For Subtask 2 (50 points):

- you must output the correct integer answer.

Examples

standard input	standard output
4 4 1 2 10 2 3 20 3 4 30 1 4 40	0
4 4 1 2 40 2 3 30 3 4 20 1 4 10	1
4 4 1 2 30 2 3 30 3 4 20 1 4 10	1
6 7 1 6 40 1 2 20 2 3 20 3 6 20 1 4 20 4 5 20 5 6 20	2

Note

In the first sample case, the government will maintain the first three roads, so no sabotage is necessary.

In the second sample case, sabotaging any of the other three roads will ensure that the first road gets maintained.

In the third sample case, the government could maintain either roads 1, 3, 4 or roads 2, 3, 4. Therefore sabotaging a road is necessary to guarantee the maintenance of road 1.

In the fourth sample case, if only one of the last six roads was sabotaged, then the government could maintain the other five.

In the second, third and fourth sample cases, any non-zero integer output will be adjudged correct for Subtask 1.