

## Problem A - The Great Ambush

It's the end of term! Jason and Raunak are preparing to leave The Kingdom and travel to the Avalanche of Complicated Math (ACM). As a student of CPSC 490, you've suffered a lot through the brutal assignments. So you want to ambush your instructors before they reach ACM.

The landscape is described by  $n$  intersections and  $m$  one-way streets. Jason and Raunak will take a walk from The Kingdom, located at intersection 0, to the ACM, located at intersection  $n - 1$ . A walk is a path that may traverse a vertex or an edge multiple times. Along with the other deadly agents of the Maximum Wolf Trade Syndicate (MWTS), you are planning to ambush them while they cross streets during their walk. However, you then remember that they were kind enough to give you multiple extensions for assignments. So you decide that you will plan your ambush in a way such that no matter how Jason and Raunak take their walk, they will be ambushed exactly once! Furthermore, it takes a lot more resources to ambush on some streets than others. So there is a cost associated with carrying out an ambush on each street. Your mission, should you choose to accept it, is to find the cost of the cheapest way of ambushing your 490 instructors. If you cannot satisfy all the constraints above, output -1.

### Input

The first line will contain  $T$ , the number of test cases. Each test case will start with two integers  $n$  ( $2 \leq n \leq 100$ ) and  $m$  ( $1 \leq m \leq 2500$ ), as described above. Following this will be  $m$  lines with 3 numbers  $a, b, c$  ( $0 \leq a, b \leq n - 1$ ), representing a one-way street from intersection  $a$  to intersection  $b$  with cost  $c$  ( $1 \leq c \leq 10^4$ ).

### Output

For each test case, output the minimum cost of ambushing Jason and Raunak, or -1 if the constraints cannot be satisfied.

### Sample Input

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1
6 7
0 1 5
0 2 5
1 3 1
2 4 1
4 1 1
3 5 5
4 5 5
```

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### Sample Output

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6
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