Problem 1. Traveling salesman problem (1 point)

Timelimit: 2 second

Problem Statement

Traveling salesman problem is one of the famous NP-hard prolbem.
It describe that "Given a list of cites and distances between pairs of cites, what is the shortest possible route that visits each city exactly once and returns to the origin city?"
Make a program that solve a TSP problem.

Input Statement

First line contains t which is the number of test cases.
First line of each test case contains n, m which are the number of node and number of edges ($3 \leq n \leq 12$,$m \leq n(n-1)/2$).
And next m line contain three numbers u, v, $c \leq 10,000$ which means there exist non-directional edges uv which cost is c.

Output Statement

For each test case, print out minimum length of TSP problem
If you can not find such cycle, printout -1
Each test case should be separated by a line.

Input Example

```
2
3 3
0 1 2
0 2 3
1 2 3
4 6
0 1 1
0 2 2
0 3 3
1 2 2
1 3 3
2 3 3
```

Output Example

```
8
9
```