EZDIJKST - Easy Dijkstra Problem

From SPOJ Online Judge: https://www.spoj.com/problems/EZDIJKST/

Determine the shortest path between the specified vertices in the graph given in the input data.

Hint: You can use Dijkstra's algorithm.

Input

first line - one integer - number of test cases

For each test case the numbers nV， nE (number of vertices, number of edges) are given,

Then nE lines follow, each containing the following numbers separated by a single space:

`ai, bi, ci`

It means that the graph being described contains an edge from ai to bi, with a weight of ci.

Below the graph description a line containing a pair of integers A， B is present.

The goal is to find the shortest path from vertex **A** to vertex **B**.

All numbers in the input data are integers in the range 0..10000.

Output

For each test case your program should output (in a separate line) a single number **C** - the length of the shortest path from **vertex A** to **vertex B**. In case there is no such path, your program should output a single word "**NO**" (without quotes)

Example

Sample Input	Sample Output
3 3 2 1 2 5 2 3 7 1 3 3 3 1 2 4 1 3 7 2 3 1 1 3 3 1 1 2 4 1 3	12 5 NO