

# Easy Dijkstra Problem

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

Hint: You can use Dijkstra's algorithm.

Hint 2: if you're a lazy C++ programmer, you can use set and cin/cout (with `sync_with_stdio(0)`) - it should suffice.

## Input

first line - one integer - number of test cases

For each test case the numbers  $V$ ,  $K$  (number of vertices, number of edges) are given.

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

$a_i, b_i, c_i$

It means that the graph being described contains an edge from  $a_i$  to  $b_i$ , with a weight of  $c_i$ .

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

**Input:**

```
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
```

**Output:**

```
12
5
NO
```