A skyscraper

Cost: 12 | Solved: 54

Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

There is an ***n***-story skyscraper in a wealthy district of city P. Everything would be great if not just one thing: the elevators of the skyscraper were built by well-known heroes Petya and Vasya, and that's the reason why they travel very strangely.

Loaders need to transfer a very heavy sculpture from one floor to another. Not-so-nice words break out of loaders' mouths while they are lifting a statue and reaching a certain floor... The inhabitants of this house are very cultured people who are not accustomed to such expressions.

Help the loaders move the statue so that the number of ugly words spoken is minimal.

Input:

The first line contains a natural ***n*** ($1 \le n \le 1000$) – the quantity of skyscraper's floors, an integer ***m*** ($0 \le m \le 100$) – the quantity of elevators, and an integer ***c*** – the quantity of curses loaders say after reaching a floor on foot.

The second line contains two numbers ***s*** – the initial floor, and ***f*** – the final floor (the one the statue needs to be delivered to).

The next ***m*** lines contain three numbers each: the number of the floor an elevator starts moving from, the number of the floor an elevator moves to, and the cost of the movement (the number of curses loaders will say).

An elevator doesn't stop on any floors between the initial and the final.

Output:

The minimal number of curses spoken by loaders.

Example:

Input	Output
5 3 2 1 3 1 2 1 1 5 4 4 5 2	3