Problem D
Little Red Riding Hood
Max no. of test cases: 20
Time limit: 2 seconds

Little Red Riding Hood is a beloved girl that everyone adores. One day, her grandmother fell ill, and she hoped to visit her grandmother as quickly as possible.

In Little Red Riding Hood's world, there are a total of a hours during the day and b hours at night. She can only travel through the villages during the day. If she's not in any village by nightfall, she will be eaten by the big bad wolf.

Little Red Riding Hood lives in Village 1, and her grandmother lives in Village n. The villages are connected by a network of roads, each requiring a certain amount of time to travel.

Since Little Red Riding Hood can only travel one kilometer per hour, starting from her village (Village 1), how long does it take her at the shortest to reach her grandmother's village without being endangered by the big bad wolf?

Input File Format

The first line of input contains an integer denoting the number of test cases to follow. For each test case, the first line contains four integers, n, m, a, and b, denoting that there are n villages, m roads connecting villages, a hours in the day and b hours in the night. The next m lines, each contains 3 integers, u, v, and w, denoting that there is a road connecting villages u and v with a distance of w.

- $2 \leq n \leq 2 \cdot 10^5$
- $0 \leq m \leq 2 \cdot 10^5$
- $1 \leq a, b, w \leq 10^9$
- $1 \leq u, v \leq n$, $u \neq v$

Output Format

For each test case, output a single integer on a line, denoting the shortest among of time needed for Little Red Riding Hood to reach grandma's village safely. If it is not possible to do so, output -1.

Sample Input

```
2
4 4 5 3
1 2 2
2 3 3
1 3 3
3 4 5
6 4 5 3
1 3 2
3 4 3
4 5 2
5 6 1
```

Output for the Sample Input

```
13
11
```