# Problem H
## Robot Communication Cost
### Time limit: 1 second

Assume there are $N$ robots indexed from 1 to $N$. Specifically, robot 1 and robot $N$ are stationary, and the other can move freely. Joe is the project manager, and he has $M$ communication records among the robots, each of which has three positive integers: $i, j, t$ indicating robot $i$ initiates a communication with robot $j$ for $t$ seconds during a period of time, and there will be a charge on robot $i$, defined by a linear integral cost function $c(t) = at + b$. Unfortunately, except robot 1 and robot $N$, there is no information about the location when the robots communicated. To understand the impact of the distribution of robots, Joe tries to properly associate the rest $N - 2$ robots with robot 1 or robot $N$. Joe partitions the robots into two groups $X$ and $Y$, one with robot 1 and the rest with robot $N$. Let $L$ be the total charge from $X$ to $Y$ and $R$ be the total charge from $Y$ to $X$. With a proper partition Joe wants to minimize $L - R$. Your task is to write a program to help Joe find the minimum possibility.

## Technical Specification

1. $1 < N < 500$
2. $1 < M < 5,000$
3. $0 < t < 1,000$
4. $-10 < a < 10,\ 0 \leq b < 1,000$

## Input File Format

The first line of the input gives the number of test cases, $T$ ($< 10$). For each case, the first line consists of two positive integers $N, M$ indicating the number of robots and the number of communications made, respectively. The second line consists of two integers $a, b$ indicating the cost function $c(x) = ax + b$. Then $M$ lines follow, where the $k$-th ($k = 1, \ldots, M$) line has 3 positive integer $i, j, t$, indicating robot $i$ communicates with $j$ for $t$ seconds.

## Output Format

For each test case, output one line that contains the minimum value.

## Sample Input

```
2
4 3
1 0
1 2 1
2 3 5
3 4 3
5 5
-1 10
1 2 2
2 3 3
1 3 2
2 4 1
5 2 4
```

## Sample Output for the Sample Input

```
-1
-8
```