2 Construction Project 2

There are N stations in JOI Kingdom, numbered from 1 to N. There are M train lines in JOI Kingdom, numbered from 1 to M. The train line i ($1 \leq i \leq M$) connects station A_i and station B_i bi-directionally, and requires C_i minutes for travel.

You, a minister of JOI Kingdom, decided to construct a new train line as follows.

- You choose integers u and v, which satisfy $1 \leq u < v \leq N$. You construct a new train line, which connects station u and station v bi-directionally, and requires L minutes for travel. Note that you can choose 2 integers such that there already be a train line connecting station u and station v.

After you construct a new train line, the King of JOI Kingdom becomes happy if he can move from station S to station T within K minutes by using some train lines. Note that transit times and waiting times for train lines are not considered.

There are $\frac{N(N-1)}{2}$ ways when you choose 2 integers u and v, and you want to know how many of these ways make the King happy.

Write a program which, given information of stations, the train lines, and the King's request, calculates number of ways to choose 2 integers that make the King happy.

Input

Read the following data from the standard input.

N M
S T L K
A_1 B_1 C_1
A_2 B_2 C_2
$\vdots$
A_M B_M C_M

Output

Write one line to the standard output. The output should contain number of ways to choose 2 integers that make the King happy.

Constraints

- $2 \leq N \leq 200\,000$.
- $1 \leq M \leq 200\,000$.
- $1 \leq S < T \leq N$.
- $1 \leq L \leq 10^9$.
- $1 \leq K \leq 10^{15}$.
- $1 \leq A_i < B_i \leq N$ $(1 \leq i \leq M)$.
- $(A_i, B_i) \neq (A_j, B_j)$ $(1 \leq i < j \leq M)$.
- $1 \leq C_i \leq 10^9$ $(1 \leq i \leq M)$.
- Given values are all integers.

Subtasks

1. (8 points) $L = 1$, $K = 2$, $C_i = 1$ $(1 \leq i \leq M)$.
2. (16 points) $N \leq 50$, $M \leq 50$.
3. (29 points) $N \leq 3\,000$, $M \leq 3\,000$.
4. (47 points) No additional constraints.

Sample Input and Sample Output

Sample Input 1	Sample Output 1
7 8 6 7 1 2 1 2 1 1 6 1 2 3 1 2 4 1 3 5 1 3 7 1 4 5 1 5 6 1	4

Suppose you choose $u = 3, v = 6$. You construct a new train line that connects station 3 and station 6 and

requires 1 minute for travel.

After you construct a new train line, it is possible to move from station 6 to station 7 in 2 minutes by using some train lines as follows. The King becomes happy because he can move from station 6 to station 7 within 2 minutes.

1. Move from station 6 to station 3 by using a train line which connects station 3 and station 6 bi-directionally. This takes 1 minutes.
2. Move from station 3 to station 7 by using a train line which connects station 3 and station 7 bi-directionally. This takes 1 minutes.

There are 4 ways to choose 2 integers that make the King happy, including this case. Therefore, output 4.

This sample input satisfies the constraints of Subtasks 1, 2, 3, 4.

Sample Input 2	Sample Output 2
3 2 1 3 1 2 1 2 1 2 3 1	3

No matter how you choose the 2 integers, the King becomes happy. In other words, there are 3 ways to choose 2 integers that make the King happy. Therefore, output 3.

This sample input satisfies the constraints of Subtasks 1, 2, 3, 4.

Sample Input 3	Sample Output 3
6 4 2 5 1000000000 1 1 2 1000000000 2 3 1000000000 2 4 1000000000 5 6 1000000000	0

No matter how you choose the 2 integers, the King doesn't become happy. Therefore, output 0.

This sample input satisfies the constraints of Subtasks 2, 3, 4.

Sample Input 4	Sample Output 4
18 21 4 8 678730772 3000000062 5 13 805281073 8 17 80983648 3 8 996533440 10 16 514277428 2 5 57914340 6 11 966149890 8 12 532734310 2 9 188599710 2 3 966306014 12 16 656457780 16 18 662633078 1 15 698078877 2 8 665665772 2 6 652261981 14 15 712798281 7 13 571169114 13 14 860543313 6 7 454251187 9 14 293590683 6 14 959532841 3 11 591245645	16

This sample input satisfies the constraints of Subtasks 2, 3, 4.