

Milk Delivery

Time Limit: 1 Second
Memory Limit: 2048 MB

Hank, a dairy farmer, needs to deliver fresh milk from **City 1** to **City N** . Some cities have roads between them and takes some time to travel. Some cities have subway stations and it takes constant time to travel between cities with subway stations if he choose subway between a city pair. He can use two types of transportation:

- **Roads:** Some cities are directly connected by bidirectional roads with specific travel time cost.
- **Subway System:** Some cities have subway stations, and all subway cities are directly connected to each other. Traveling between any two subway cities takes a constant time T , regardless of distance.

There could be multiple roads between a same pair of cities.

Output the minimal time required for Hank to delivery milk to **City N** .

Input

The first line contains four integers: N (the total number of cities), M (the number of bidirectional roads), K (the number of cities with subway stations), and T (the constant travel time between any two subway cities).

The second line contains K integers, representing the cities that have subway stations.

The next M lines each contain three integers: x y w where:

- x, y — Cities are bidirectionally connected by a road.
- w — Travel time required to move between x and y .

The constraints are $2 \leq N \leq 10^5$, $1 \leq M \leq 2 \times 10^5$, $1 \leq K \leq N$, and $1 \leq T, w \leq 2 \times 10^5$, where cities are numbered from 1 to N .

Output

Output an integer, the **minimum total time** required to transport milk from **City 1** to **City N** . Returns -1 if Hank cannot reach **city N** .

Sample Inputs

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

Sample Outputs

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11
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