

Problem G: Guarding Gotham

As they say, ‘always be yourself, unless you can be Batman – then be Batman!’ Since we care deeply about you, here’s your chance to practice for your big moment!

It is the year 2005. Scarecrow wants to poison Gotham City with his mind-altering drugs by throwing them into one of Gotham’s access points to the water main (although of course he won’t do it himself; he’ll send his trustworthy evil henchman Crowcodile instead). There are several access points all over Gotham, and all of Gotham’s households are hooked up to the main through the pipes that connect the access points.

Now, being an A-list villain, Scarecrow has standards and wants to complete his evil schemes as efficiently as possible. ‘Efficient’ here means that he wants to minimise the time between pouring the poison into the water and the poison reaching even the furthest corners of Gotham City.

As it so happens, his timing for this particularly evil scheme is excellent since Batman is currently on vacation. Luckily, you, his vacation stand-in, got wind of the plan, but there are far too many access points to the water main to keep an eye on them all. You do know one thing, however: as soon as the poison is poured in at or reaches a given access point, it will spread through each connected pipe at a speed of 1 metre per second.

You want to narrow your search for Scarecrow to those access points he might actually choose given that he wants to be as efficient as possible. Given a map of the Gotham City water supply network, compute those access points!

Did you know that ... ?



... the first scarecrows were made about 3,000 years ago, while the first bats appeared over 50 million years ago?

Batman, however, entered the scene only in 1939, which gave scarecrows way too much time to develop evil schemes.

Input

The input consists of:

- One line with two integers n and m ($1 \leq n \leq 200$, $0 \leq m \leq 20\,000$), the number of water main access points in the network and the number of connections between access points, respectively. The access points are numbered from 1 to n .
- m lines, each containing three integers a , b and ℓ ($1 \leq a, b \leq n$, $1 \leq \ell \leq 10^6$) and specifying a connection between access point a and b with length ℓ metres.

All connections are bidirectional and any existing connection appears in the input exactly once. No access point will have a connection to itself. You can assume Gotham City’s water supply network to be connected.

Output

Output the smallest amount of time (in seconds, with an absolute error of at most 10^{-6}) that it takes to spread the poison everywhere if Scarecrow chooses an optimal access point. Then output all such access points, in any order.

Sample Input 1

```
3 3
1 2 1
1 3 1
2 3 1
```

Sample Output 1

```
1.5
1
2
3
```

Sample Input 2

```
4 5
1 2 5
2 3 2
3 4 4
4 1 7
1 3 3
```

Sample Output 2

```
7
1
3
```

Sample Input 3

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

Sample Output 3

```
9
1
3
```