# Yapanese Highways 3

Time Limit: 2 seconds

## Problem Description

Yapan Kingdom has $n$ towns $t_1, \ldots, t_n$, and it suffered from an earthquake recently. In order to rebuild Yapan after the earthquake, Sori Yabe, the Premier of Yapan Kingdom, plans to build more highways to collect more tolls. According to his plan, there will be $m$ highways $H_1, \ldots, H_m$ where $H_i$ ends at towns $t_{u_i}$ and $t_{v_i}$, and the toll of $H_i$ is $w_i$ Yapanese Yan (Yapanese currency unit). Sori Yabe wants to know how much money he has to spend for visiting towns in Yapan after the new highways are built. Since he is the Premier of Yapan Kingdom, he lives in Yokyo, the capital city of Yapan. Please write a program to compute the maximum value of the minimum tolls of traveling from Yokyo to all the other towns in Yapan.

## Technical Specifications

1. The number of test cases is no more than 20.
2. Hard: $2 \leq n \leq 3000$, $n - 1 \leq m \leq 10000$.
3. Basic: $2 \leq n \leq 500$, $n - 1 \leq m \leq 3000$.
4. $0 < w_i \leq 1000$.
5. Yokyo, the capital city of Yapan, is $t_1$.
6. The highways are bidirectional.
7. There always exists a path from Yokyo to any other towns.

## Input Format

The first line of the input file contains an integer indicating the number of test cases. The first line of each test case contains two integers $n$ and $m$. The $i$-th of the following $m$ lines contains three integers $u, v, w$ indicating that the toll of $H_i$ is $w$ and it ends at towns $t_u$ and $t_v$. Note: the integers in the same line are separated by blanks.

## Output Format

For each test case, output the maximum value of the minimum tolls of traveling from Yokyo to all the other towns in Yapan.

## Sample Input

```
2
2 1
1 2 1
4 5
1 2 1
2 3 2
3 4 3
4 1 10
1 3 1
```

## Sample Output

```
1
4
```