

Trip

Ivancho can't wait for the summer to come and he already started to plan his holiday. This year he decided to embark on a journey around the world. After having a look at the map, he saw the possible cities he can visit were **N**. Moreover, he determined **M** one-way flights between them that he could potentially use. Ivancho's trip is sponsored by the company he works for, so he wanted to choose such flights which give the highest average cost. After taking this decision, he had much harder problem to solve - which beer to take with him for the holiday. As you can imagine, he totally forgot about his first task and asks you for help. In return he promises to send you a postcard from each destination on his way.

Input: On the first line of the input file **trip.in** are written two natural numbers **N** and **M** - number of towns and number of one-way flights on the Ivancho's map respectively. Each of the next **M** lines contains three integer numbers **a**, **b** and **c**, which indicate there is a flight from **a** to **b** with cost **c**. It may seem strange but it is possible to have flights from one town to the same town (i.e. **a = b**) and to have several flights between the same pair of cities.

Output: In practice, Ivancho wants to find the cycle with the highest average cost on his map. Furthermore, Ivancho must not use the same flight more than once. For example, if the route Ivancho chooses is consisted of the edges $e_1, e_2, \dots, e_k$, the edge e_1 must go out of the town to which e_k points. Also, no two edges can be the same (note that, however, if there is more than one flight between two cities, Ivancho might be able to go from the one city to the other more than once). If the costs of the edges are respectively $c(e_1), c(e_2), \dots, c(e_k)$, the average cost of the route is calculated by the formula $(c(e_1) + c(e_2) + \dots + c(e_k)) / k$.

On the only line of the output file **trip.out** the program should write the maximal average cost of a cycle in the map with precision of at least two digits after the decimal point. The test case will be passed successfully if the absolute and relative error of your answer is less than 0.01.

Constraints:

$1 \leq N \leq 1000$

$1 \leq M \leq 2000$

$1 \leq a, b \leq N$

$1 \leq c \leq 1000$

Time limit: 0.5 sek

Memory limit: 256 MB

Preliminary test cases: 4

Final test cases: 15

Example:

trip.in	trip.out
4 5 3 1 5 1 2 7 2 4 4 4 1 12 2 3 9	7.6667