

## Problem I. The Great Bubble Bridge Network

Input file: *standard input*  
Output file: *standard output*  
Time limit: 7 seconds  
Memory limit: 1024 mebibytes

The Bubble Kingdom was once an archipelago of  $N$  cities spread across the vast Bubble Sea. For centuries, the Bubble Engineers constructed  $M$  bridges between these cities, creating a grand network to connect them. However, each bridge had its own quirks—some were built to last only a few years, while others could only carry a limited amount of weight. As time passed, many of these ancient bridges fell into disrepair, leaving historians and adventurers alike puzzled about the true state of the Bubble Kingdom’s transportation system at any given point in history.

Your task is to unravel the mysteries of the Bubble Kingdom’s old bridge network. You are provided with a historical record of the bridges that once connected the cities. Each record details the cities connected by a bi-directional bridge, the years during which the bridge was operational, and the maximum weight it could support. Now, as a curious adventurer, you must answer  $Q$  questions about the feasibility of travel between two cities in specific years, given the weight of your trusty Bubble Wagon.

### Input

The first line contains three integers  $N$ ,  $M$ , and  $Q$ : the number of cities, the number of bridge records, and the number of queries, respectively ( $2 \leq N \leq 5 \cdot 10^4$ ,  $1 \leq M, Q \leq 10^5$ ).

Each of the next  $M$  lines contains five integers:  $U$ ,  $V$ ,  $W$ ,  $Y_1$ , and  $Y_2$  ( $1 \leq U, V \leq N$ ,  $U \neq V$ ,  $1 \leq W \leq 10^9$ ,  $1 \leq Y_1 \leq Y_2 \leq 10^9$ ). They mean a bridge between city  $U$  and city  $V$  existed from year  $Y_1$  to year  $Y_2$  (both inclusive) and could carry at most  $W$  weight.

Each of the next  $Q$  lines contains four integers:  $U$ ,  $V$ ,  $W$ , and  $Y$  ( $1 \leq U, V \leq N$ ,  $U \neq V$ ,  $1 \leq W \leq 10^9$ ,  $1 \leq Y \leq 10^9$ ). They mean you must determine if a Bubble Wagon of weight  $W$  could have traveled from city  $U$  to city  $V$  during year  $Y$ .

### Output

For each query, output a line with the answer: “Yes” if travel is possible, or “No” otherwise.

### Example

<i>standard input</i>	<i>standard output</i>
4 5 5	Yes
1 2 5 1 3	Yes
1 2 10 3 5	No
1 3 6 1 2	No
2 3 8 2 5	Yes
2 4 7 2 3	
1 4 6 2	
1 3 8 5	
3 4 8 3	
1 2 10 2	
2 3 5 1	