

Problem DISARMING: Disarming Bombs

The *Illuminati* is a secret organization founded in the 16th century to oppose the tyranny of the Roman Catholic Church. The church made an example of their power by violently executing four members of the Illuminati. From that time on, they seek for revenge by trying to annihilate the Roman Catholic Church. They failed up to now! At today's conclave, the College of Cardinals, is meeting in the Sistine Chapel to elect a new pope. The Illuminati managed to plant an anti-matter bomb with an immense explosive force in the catacombs below the chapel. You are trapped down there alone — the red digits on a small display tell you that you have less than five hours to disarm the bomb. So you better hurry!

Your knowledge about the structure of the bomb is limited. But, fortunately, you have been able to obtain some details by torturing the engineer of the bomb earlier. The bomb has many identical fuzes that can initiate the detonation. *Some* of them are triggered by the countdown. In order that those fuzes fire synchronously, they are all connected to each other. However the remaining fuzes serve a different purpose: To complicate the disarming, these *dummy fuzes* fire immediately if you happen to disarm one of them. The dummy fuzes are also connected to each other but *not* to the fuzes of the other type. Thus, you must somehow distinguish the two types of fuzes, so that you can safely disarm all fuzes except from the dummy fuzes.

After examining the internals of the bomb for a while, you observe for a couple of fuzes, that they are definitely *not connected* (neither directly nor indirectly) and consequently of *different type*. The situation still seems to be hopeless and you nearly give up in despair as suddenly you remember that the engineer revealed the number of dummy fuzes he added to the bomb. After a moment of intense silence, you recognize that you still have a chance to escape the catacombs alive. The key question is — can you be absolutely sure about the types of all fuzes under the assumptions given above?

Input

The first line of input contains the number of test cases (at most 10). The descriptions of the test cases follow, separated from each other by empty lines. Each test case starts with three integer values, separated by spaces, on the first line: The total number n of fuzes ($0 < n < 6,500$), the number d of dummy fuzes ($0 \leq d < n$), and the number e of fuze pairs for which you can determine that they are definitely *not* connected. The following e lines ($0 \leq e < 8 \cdot 10^6$) hold two integers a_i and b_i ($a_i \neq b_i$, $0 \leq a_i < n$, $0 \leq b_i < n$), separated by a space, that identify the fuzes that are of different type. No equivalent pairs are listed twice. The fuzes are numbered from 0 to $n - 1$.

Output

For each test case print “Yes” on a line of its own if it is possible to disarm the bomb safely, print “No” if you cannot determine the fuze types for sure and print “Darn” if the assumptions are self-contradictory.

Calm down, keep cool, and save your life by solving the problem — *now!* You are better off by making *no mistake* and finishing *in time!* Retain the facts in *memory* but better be careful! Now get going...

(Sample Input and Output are provided on the next page.)

Sample Input 1

3
6 2 4
0 1
0 2
3 4
3 5

6 3 4
0 1
0 2
3 4
3 5

3 0 3
1 0
2 1
2 0

Sample Output 1

Yes
No
Darn