

Day 2 - Problem 3 – Bragging fishermen

Ohrid lake fishermen are known for their fishing skills. But even more, they are also known for their bragging. To prove who the best is, the mayor organized a tournament. In the tournament, games are played between several fishermen. In the morning, a special selected lot of Ohrid trout is released in the lake. It contains 100 pieces, each one with different number of red dots (starting from 1 up to 100). The competing fishermen go into the lake and start fishing. They start with score of 1. With each fish they catch, they count the number of red dots and multiply their score with that number. To make the game environment friendly, they are not allowed to have score (product of the red dots) higher than 5000. The rest of the fishes that are not caught during the day will dive deep into the lake. In the evening, all fishermen meet at the mayors' office to decide who the best is. Each of them reports his score. But since honesty is not their strong side, some of them may report a false score. Then the mayor decides if the combination of the reported scores is possible. Your task is to help him decide if the combination of the scores is possible.

Input

The first line of the input contains single integer $2 \leq n \leq 6$ – the number of fishermen who played in each round. The second line of the input contains single integer $2 \leq m \leq 10$, the number of test cases. Each of the following m lines contain n integers - the scores of fishermen.

Output

For every test case in the input, the output is single line with YES if the combination of the scores is possible or NO if it is not possible.

Clarification

To clarify again, your task is to decide if the combination of the reported score is possible or not. For example, if there are 2 fishermen and the first one says 294 and the second one says 202, that score is possible and you output YES. But if the first one says 343 and the second one says 49, the score is not possible, since 49 can only be achieved as $1 \cdot 49$ and 343 can only be achieved as $1 \cdot 7 \cdot 49$. In that case, you output NO.

Grading

There will be 2 test cases with 2 fishermen, 3 test cases with 3 fishermen and 5 test cases with 4 or more fishermen playing.

Example

Input	Output
2	YES
3	NO
62 36	YES
3599 610	
234 4324	