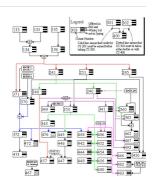
Prerequisites?

Freddie the frosh has chosen to take k courses. To meet the degree requirements, he must take courses from each of several categories. Can you assure Freddie that he will graduate, based on his course selection?

Input

Input consists of several test cases, at most 50. For each case, the first line of input contains $1 \le k \le 100$, the number of courses Freddie has chosen, and $0 \le m \le 100$, the number of categories. A line follow containing k 4-digit integers; each is the number of a course selected by Freddie. Each category is represented by a line containing $1 \le c \le 100$, the number of courses in the category, $0 \le r \le c$, the minimum number of courses from the category that



Problem ID: prerequisites

CPU Time limit: 1 second Memory limit: 1024 MB

Author: Gordon V. Cormack

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Difficulty: 2.0

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must be taken, and the c course numbers in the category. Each course number is a 4-digit integer. The same course may fulfil several category requirements. Freddie's selections, and the course numbers in any particular category, are distinct. A line containing 0 follows the last test case.

Output

For each test case, output a line containing "yes" if Freddie's course selection meets the degree requirements; otherwise output "no".

Sample Input 1

Sample Output 1

```
0123 9876 2222
2 1 8888 2222
3 2 9876 2222 7654
0123 9876 2222
2 2 8888 2222
3 2 7654 9876 2222
```

yes no