

A. False Alarm

time limit per test: 1 second
 memory limit per test: 256 megabytes

Yousef is at the entrance of a long hallway with n doors in a row, numbered from 1 to n . He needs to pass through all the doors from 1 to n in order of numbering and reach the exit (past door n).

Each door can be open or closed. If a door is open, Yousef passes through it in 1 second. If the door is closed, Yousef can't pass through it.

However, Yousef has a special button which he can use **at most once** at any moment. This button makes all closed doors become open for x seconds.

Your task is to determine if Yousef can pass through all the doors if he can use the button at most once.

Input

The first line of the input contains an integer t ($1 \leq t \leq 1000$) — the number of test cases.

The first line of each test case contains two integers n, x ($1 \leq n, x \leq 10$) — the number of doors and the number of seconds of the button, respectively.

The second line of each test case contains n integers a_1, a_2, \dots, a_n ($a_i \in \{0, 1\}$) — the state of each door. Open doors are represented by '0', while closed doors are represented by '1'.

It is guaranteed that each test case contains at least one closed door.

Output

For each test case, output "YES" if Yousef can reach the exit, and "NO" otherwise.

You can output the answer in any case (upper or lower). For example, the strings "yEs", "yes", "Yes", and "YES" will be recognized as positive responses.

Example

input	Copy
7	
4 2	
0 1 1 0	
6 3	
1 0 1 1 0 0	
8 8	
1 1 1 0 0 1 1 1	
1 2	
1	
5 1	
1 0 1 0 1	
7 4	
0 0 0 1 1 0 1	
10 3	
0 1 0 0 1 0 0 1 0 0	
output	Copy
YES	
NO	
YES	
YES	
NO	
YES	
NO	

Note

In the first test case, the optimal way is as follows:

- At time 0, the door is open, so Yousef passes.
- At time 1, the door is closed, Yousef can use the button now and pass through the door.
- At time 2, the button's effect is still on, so Yousef can still pass.

Codeforces Round 1029 (Div. 3)

Contest is running

02:01:14

Contestant



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Choose file: No file chosen

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Submission	Time	Verdict
323425017	Jun/08/2025 17:48	Accepted

- At time 3, the button's effect has finished, but the door is open. Yousef passes and reaches the exit.

In the second test case, Yousef has a 3-second button, but he would need at least a 4-second button to reach the exit. Therefore, the answer is NO.

In the third test case, Yousef can turn on the button before starting to move. All the doors will stay open until he reaches the exit.

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