# Water Supply System Disaster

You are given a system of pipes and **N** connecting parts. The pipes are bidirectional, so the water can flow both ways.

Diagram, engineering drawing

Description automatically generated

Your task is to find the connecting part, which if blown with an explosive, will leave exactly **M** separated parts of the system.

## Input

* On the first line there will be **N** – the total number of connecting parts in the system.
  + The parts are numbered from **1** to **N**.
* On the second line there will be **M –** the separated parts of the system after the explosion.
* On the next **N** lines there will be the connections between the connecting parts.
  + List of connections (separated by a space) for the connecting parts from **1** to **N**.
    - On the first of the lines there will be connections for the first connecting part.
    - On the second – the connections of the second connecting part and so on.

## Output

* If the system is connected initially but we cannot separate it to exactly **M** parts with one explosive – print the number **0**.
* If the system is connected initially and we can separate it to exactly **M** parts – print the part, we want to explode.

## Constraints

* **N** will be an integer in the range [**2**…**1000**].
* **M** will be an integer in the range [**2**…**10**].
* There will be **only one possible solution** in all tests.

## Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| 5  2  4 5  3 5  2 5  1 5  1 2 3 4 | 5 | Diagram  Description automatically generated  If we put an explosive on 5, the system will be separated in exactly M (2) parts. |
| 5  2  5  3 5  2 5  5  1 2 3 4 | 0 | Diagram  Description automatically generated  If we put an explosive on 5, the system will be separated in 3 parts and M is 2, so we cannot separate it to exactly M parts with one explosive |