

1466. Reorder Routes to Make All Paths Lead to the City Zero

Description

There are `n` cities numbered from `0` to `n - 1` and `n - 1` roads such that there is only one way to travel between two different cities (this network form a tree). Last year, The ministry of transport decided to orient the roads in one direction because they are too narrow.

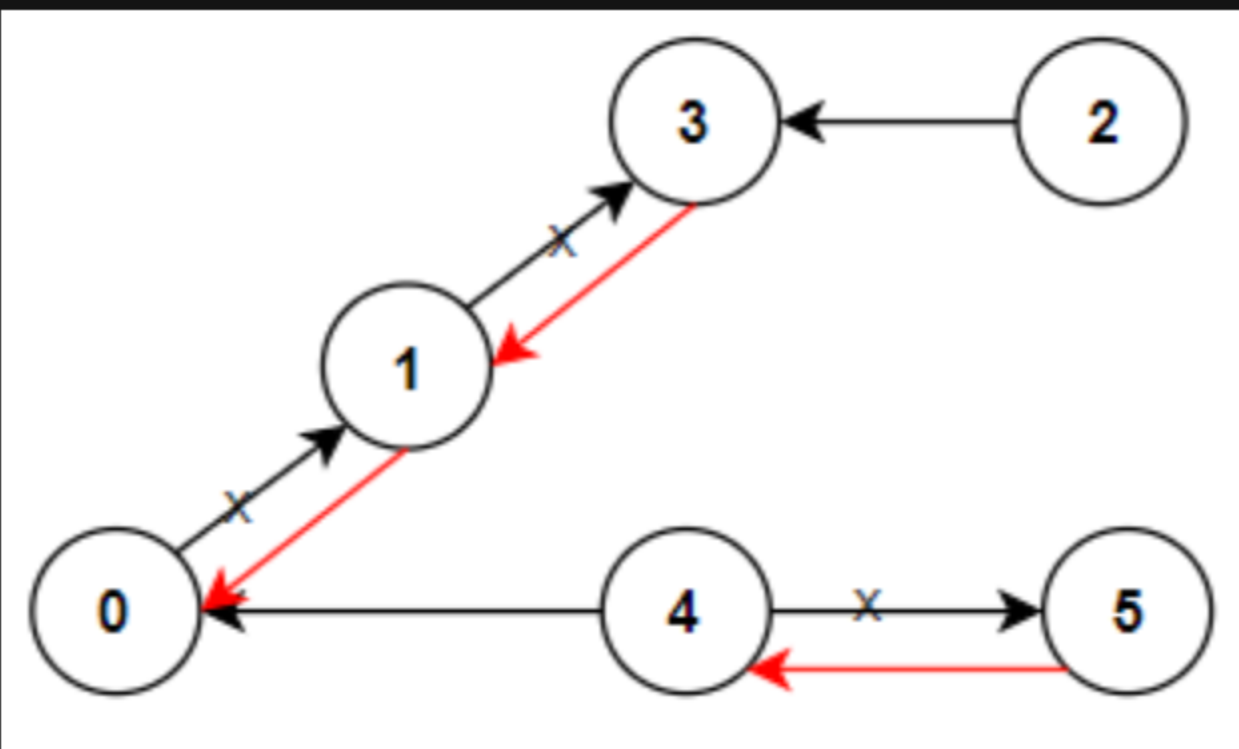
Roads are represented by `connections` where `connections[i] = [ai, bi]` represents a road from city `ai` to city `bi`.

This year, there will be a big event in the capital (city `0`), and many people want to travel to this city.

Your task consists of reorienting some roads such that each city can visit the city `0`. Return the **minimum** number of edges changed.

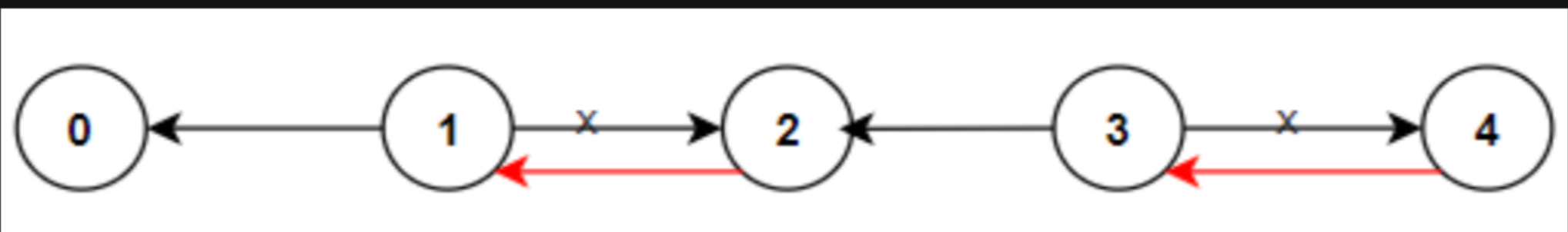
It's **guaranteed** that each city can reach city `0` after reorder.

Example 1:



Input: `n = 6, connections = [[0,1],[1,3],[2,3],[4,0],[4,5]]`
Output: `3`
Explanation: Change the direction of edges show in red such that each node can reach the node `0` (capital).

Example 2:



Input: `n = 5, connections = [[1,0],[1,2],[3,2],[3,4]]`
Output: `2`
Explanation: Change the direction of edges show in red such that each node can reach the node `0` (capital).

Example 3:

Input: `n = 3, connections = [[1,0],[2,0]]`
Output: `0`

Constraints:

- `2 <= n <= 5 * 104`
- `connections.length == n - 1`
- `connections[i].length == 2`
- `0 <= ai, bi <= n - 1`
- `ai != bi`

