# 02. Galactic Beacons

*You are done with particles acceleration and now you move to galactic travelling industry. With the new spaceships you are able to move through the galaxy in no time, but this of course requires deep knowledge in pathfinding, you have to find the path from the initial position of the spaceship to the destination.*

The galactic beacons are actually a neutron stars which have immense gravitational pull and you are unable to move your ship through them, but they are pretty useful because those objects rotate at extreme speed and they emit radio waves across the universe which can guide an astronomy traveler on his way. So you need to go around those.

You are given matrix which represents the local galactic cluster **with zeroes and ones** the **ones are the neutron stars (known as pulsars) you cannot move through those, the only allowed path to move are the zeroes,** the **start position of the ship is marked with 3 and the destination you need to reach is marked with 5**.

Your task is to find the path for the ship to reach its destination, and along the way to **keep track of the times you had to choose on which way to go**. The number of split ways is **the final number your program should print**.

**There will always be** **only one path for the ship to reach the destination point**.

Calculate **the total number of times you had to choose on which way to go and print that number on the console**.

**Note** that the path includes all the cells from **start to end (inclusive)**, which means that you have to check those cells too for possible ways, **since even at the end of the path it is still a choice to be made if you want to go anywhere or stay.**

## Input

* The input will come from the console on the first line will be **N** the number of lines to read the map.
* On the next N lines the **map itself**

## Output

* The output is **always a single number**.

## Constraints

* All input lines will be **valid the first number will always be not less than the second**.
* The input will be in the range **[0…9999999]**

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 5  311111  000011  101111  101011  100005 | 2 |
| 6  111111000000111  111311011110011  111010001011011  110001011110001  111010010111011  111000100500000 | 4 |

*"The Universe is under no obligation to make sense to you."*