9. Obstacles

Program file: Obstacles.java **Input file: obstacles.dat**

You are taking part in a Robotics Competition. Robots have to negotiate a floor with obstacles for this competition. However, you could not finish making your robot before the given day, and your robot can be made to move only in two directions -- eastward and southward (right and down). Can you help figure out how many ways there are for the robot to go from entrance to exit?

The floor is laid out in the form of a rectangular grid, with `N` rows and `M` columns. The robot will start from the top left corner, (0,0), and exit at the bottom right (`N`-1, `M`-1). Positions that the robot can occupy are marked by '.' and obstacles are marked by '*'. The task is to find the number of paths from (0,0) to (`N` -1, `M`-1).

Input

The first line of input has the number of test cases `T`. For each test case, the first two lines will contain the integers `N` and `M` denoting the number of rows and columns in the floor respectively. This will be followed by `N` lines. Each line will have m characters – either '*' or '.' denoting an obstacle or clear path, respectively.

Output

Print the number of paths the robot can take to exit the grid.

Example Input:

```
3
2
2
.*
..
2
3
.*.
*..
5
4
....
.*..
.*..
....
***.
```

Example Output:

```
1
0
5
```