Back to all puzzles

Battleship

Warmup Time limit: 5s Solved

You're playing Battleship on a grid of cells with R rows and C columns. There are 0 or more battleships on the grid, each occupying a single distinct cell. The cell in the ith row from the top and jth column from the left either contains a battleship ($G_{i,j} = 1$) or doesn't ($G_{i,j} = 0$).

You're going to fire a single shot at a random cell in the grid. You'll choose this cell uniformly at random from the $R * C$ possible cells. You're interested in the probability that the cell hit by your shot contains a battleship.

Your task is to implement the function `getHitProbability(R, C, G)` which returns this probability.

Note: Your return value must have an absolute or relative error of at most 10^{-6} to be considered correct.

Constraints

$1 \leq R, C \leq 100$
$0 \leq G_{i,j} \leq 1$

Sample test case #1

```
R = 2
C = 3
G = 0 0 1
    1 0 1
```

```
Expected Return Value = 0.50000000
```

Sample test case #2

```
R = 2
C = 2
G = 1 1
    1 1
```

```
Expected Return Value = 1.00000000
```

Sample Explanation

In the first case, 3 of the 6 cells in the grid contain battleships. Therefore, the probability that your shot will hit one of them is $3/6 = 0.5$.

In the second case, all 4 cells contain battleships, resulting in a probability of 1.0 of hitting a battleship.

⚠ **The code editor for solving puzzles is only available on wider screens.**

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