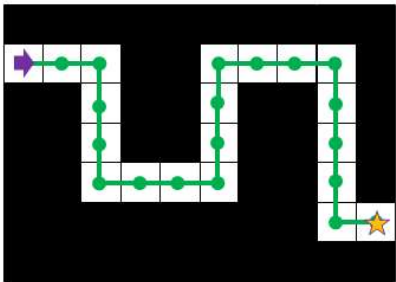


# 12816 - Maze Difficulty Sorting

## Description

- We are developing a computer game, and we need to sort mazes according to their difficulty
  - so that game levels can begin from easy mazes to difficult mazes and achieve a good game experience
- Difficulty factors (larger is better)\*
  - N1: Number of forks along the correct path
  - N2: Number of dead ends
  - L1: Length of the correct path
  - L2: Medium length of incorrect paths apart from the correct path
    - For a even number of incorrect paths, take the average of the medium two
- Overall difficulty = ((N1 + N2) \* (L1 + L2))
- Tie breaker  
N1 --> N2 --> L1 --> L2 --> Larger serial number is more difficult

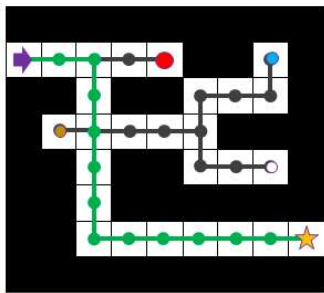
## Example 1



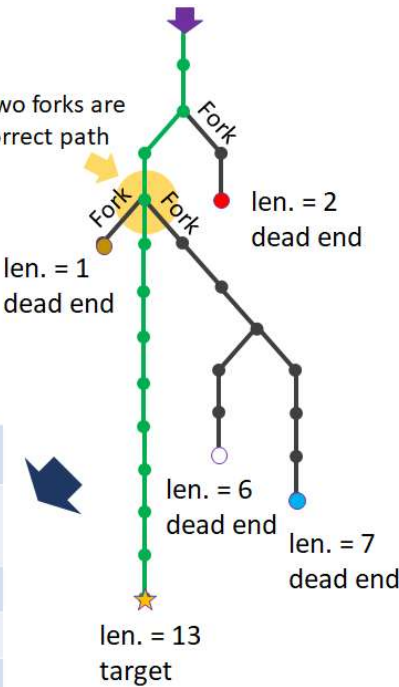
Overall Difficulty		0
N1	Number of forks <b>along the correct path</b>	0
N2	Number of dead ends	0
L1	Length of the correct path	19
L2	Medium length of incorrect paths <b>apart from the correct path</b>	0



# Example 2



Note here two forks are along the correct path



Overall Difficulty		119
N1	Number of forks <b>along the correct path</b>	3
N2	Number of dead ends	4
L1	Length of the correct path	13
L2	Medium length of incorrect paths <b>apart from the correct path</b>	4

## Input

### Input

Number of mazes ( $\geq 1$ )

Serial number of each maze

Width and height

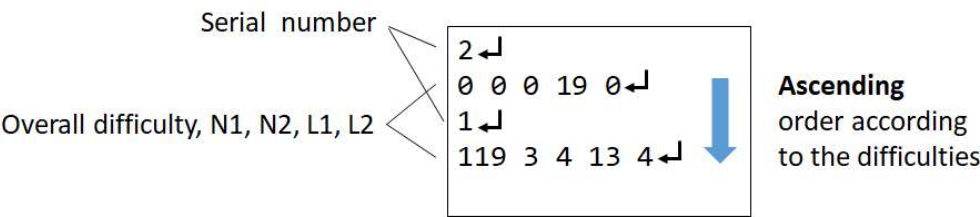
9 8

10 7

- Rules of each maze**
- Four valid moving directions, up, down, left, and right
  - Characters 'N' are walls, and characters '.' are paths.
  - No cycle
  - Entry is at (0, 1) and the target is at (width-1, height-2)
  - Surrounded by walls excepting the entry and target

## Output

# Output



## Sample Input

Download (data:text/plain;charset=utf-8,5%0D%0A1%0D%0A9%208%0D%0ANNNNNNNNNN%0D%0A.....NN.N%0D%0ANN.NN...N%0D%0AN.....NNN%0D%0ANN.N

```
5
1
9 8
NNNNNNNNN
.....NN.N
NN.NN...N
N.....NNN
NN.NN...N
NN.NNNNNN
NN.....
NNNNNNNNN
2
10 7
NNNNNNNNNN
...NN...N
NN.NN.NN.N
NN.NN.NN.N
NN...NN.N
NNNNNNNN..
NNNNNNNNNN
3
17 7
NNNNNNNNNNNNNNNNNN
....N...N.N....N
NNN.N.NNN.N.NNNNN
N....N.....N
N.NNN.N.N.N.N.N.N
N.N....N.N.N.N..
NNNNNNNNNNNNNNNNNN
4
7 13
NNNNNNNN
.....N
N.N.NNN
N.N...N
NNN.N.N
N...N.N
NNN.N.N
N...N.N
NNNNN.N
N....N
NNN.NNN
N.....
NNNNNNNN
5
15 7
NNNNNNNNNNNNNNNN
.....N....N
NNNNN.NNN.NNNNN
N.N.....N.N.N
N.N.NNN.N.N.N.N
N....N.N.....
NNNNNNNNNNNNNNNN
```

Sample Output

Download (data:text/plain;charset=utf-8,2%0D%0A0%200%200%2019%200%0D%0A1%0D%0A119%203%204%2013%204%0D%0A4%0D%0A242%205%206%202

```
2
0 0 0 19 0
1
119 3 4 13 4
4
242 5 6 20 2
5
260 6 7 18 2
3
416 8 8 24 2
```

Tags

Discuss