**16. Get Grinched (Part 2)**

# Program Name: grinch.java Input File: grinch.dat

Sammy Klaws and his elves are passing out presents to good boys and girls. Each child is represented by a "T", the elf’s starting position is represented by "R", walls are represented by "#", and open spaces are represented by “.”. Note that the elf can move through the "T" that marks each child’s position but can’t move through walls. However, the elf can only pass out one present at a time, so he must return to the original position to get another present. Note that the elf does not have to return to the original position after giving a gift to the last child.

**Input**

The first integer, n, indicates the number of test cases that follow. The next three integers r, c, and t represent the rows and columns of the situation and the number of children there are, respectively. The next r lines contain c characters, indicating what is at that spot. There will always be at least 1 child. The elf can only move up, down, left, or right, every movement takes one unit of time, and it does not take time to grab a new present or give a present to a child.

**Output**

You should output the minimum time it takes to pass out presents to every child. If the elf cannot reach every child, output Get Grinched!

**Example Input File**

3

3 3 2

###

..T

R.T

6 4 3

R...

##..

###.

T.#.

T.#.

T...

5 2 7

RT

TT

TT

##

TT

**Example Output to Screen**

7

59

Get Grinched!