Prjónamynstur

Problem ID: prjonamynstur

Photo from flickr.com

Heiðrún thoroughly enjoys knitting all sorts of garments for her family members. Whenever a new baby arrives in the family, one can expect that a dress, hat or sweater is her next project.

When Heiðrún knits, she often makes use of recipes, also known as knitting patterns, which can be found in books, magazines or even on the internet. These recipes are displayed in a graphic manner as tiles in a two dimensional grid. There are many different types of knitting loops which affect the appearance of the clothing. Therefore, each tile in the recipe is marked with a symbol to indicate what type of loop should be knitted. Since the types of loops are different, knitting them requires varying amounts of yarn. The amount of yarn used is measured in millimeters and the costs of each type of loop are the following:

Type of loop	Symbol	Yarn in millimeters
Garter stitch	`.`	20
Yarn over	`O`	10
Slip one stitch, knit next stitch and pass slip stitch over knit stitch	`\`	25
Knit two stitches together	`/`	25
Knit three stitches together	`A`	35
No stitch	`^`	5
Purl on right side, knit on wrong side	`v`	22

Now Heiðrún is wondering whether she has enough yarn for her next project. If she shows you the recipe she intends to follow, can you tell her how much yarn she will need?

Input

The first line of input consists of two integers n, the number of rows in the recipe, and m, the number of columns in the recipe. Then n lines follow, each consisting of m symbols, where each line represents a row in the recipe. You may assume the recipe will only contain symbols from the table above.

Output

Output one integer, the amount of yarn required for the recipe in millimeters.

Scoring

Group	Points	Constraints
1	40	$1 \leq n, m \leq 50$
2	40	$1 \leq n, m \leq 1\,000$ and the recipe consists entirely of garter stitches.
3	20	$1 \leq n, m \leq 1\,000$

Sample Input 1

```
3 5
.....
.....
.....
```

Sample Output 1

```
300
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Sample Input 2	Sample Output 2
16 16 ....\O....OAO.... ....\O..\O...O/.. ....\O..\O...O/.. ....\O.....O/.. ....\O.....O/... ....\O...O/.... ....\O.O/..... ....\O.....	5035