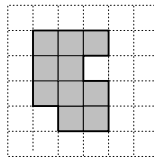


Problem G

Area

`area.java`, `area.c`, `area.C`

You are to write a program that computes the area of a rectangle delimited by the surrounding path. The path is always closed and runs along the grid lines, i.e. between the squares of the grid. You can safely assume that the path never touches or crosses itself.



Input Specification

The first line of the input file contains the number of test cases in the file. Each test case that follows consists of two lines. The first line of each case contains two integer numbers X and Y specifying the starting point of the path. The second line contains a string of variable length. Every letter in the string symbolizes a move of length one along the grid. Only the letters 'W' ("west"), 'E' ("east"), 'N' ("north"), 'S' ("south"), and '.' ("end of path", no move) appear in the string. The end-of-path character ('.') is immediately followed by the end of the line. The length of each input line will never exceed 100000 characters.

Output Specification

For each test case, output must contain one single line with the text **The area is XX squares.** - the letters XX should be replaced by the computed area of the given polygon.

Sample Input

```
1
2 1
EENNWNENWWWSSSES.
```

Output for Sample Input

The area is 10 squares.