Golf Fine

Land development company Developers-R-Us has been in constant battle with environmentalists for decades. In recent years, the company has been responsible for destroying the habitat of the Michigan monkey flower, and has faced large fines as a consequence. The lawyers for this land development company have thought up a new idea - a sort of loophole in the system. The company has purchased a large plot of land, but will not develop all of it, thus incurring fines only for those areas containing monkey flowers that are adjacent (horizontally, vertically, or diagonally) to developed land. The environmental engineers of Developers-R-Us have provided you, the software engineer, with a series of grid maps representing the area where a new golf course will be built. They would like to determine the area which will be covered by the proposed golf course, as well as the fines the company will have to pay for building it. You will be provided with a 10 x 10 grid, representing the 100 square acres being used to build the golf course. Each acre of monkey flowers along the path costs $50 000.

Input

Input will consist of ten lines, each containing ten characters, where:

- . - represents land not being developed
- s - represents the start of the golf course; there will be exactly one such acre in the whole gridmap
- d - represents an acre of developed land; note that there may be developed land which is not connected (horizontally, vertically, or diagonally) to the golf course, but this is not your problem
- m - represents an acre of land containing Michigan monkey flowers

Output

Provide, on two separate lines, the number of acres being developed for the golf course, and the fine for building the course next to areas containing Michigan monkey flowers. Pay close attention to the output format for the fine: there must be a dollar sign at the beginning of the line, and a space should be used as thousands separator.

Example

Input

```
..........
.sd.......
..d.......
..dm......
..d.......
..d...m...
..ddddm...
..........
...ddd....
...mmm....
```

Output

```
10
$150 000
```