

The goal of the game is to find where all the mines are located within a  $M \times N$  field.

The game shows a number in a square which tells you how many mines there are adjacent to that square. Each square has at most eight adjacent squares. The  $4 \times 4$  field on the left contains two mines, each represented by a “\*” character. If we represent the same field by the hint numbers described above, we end up with the field on the right:

*...	*100
....	2210
.*..	1*10
....	1110

### Input

The input will consist of an arbitrary number of fields. The first line of each field contains two integers  $N$  and  $M$  ( $0 < N, M \leq 100$ ) which stand for the number of lines and columns of the field, respectively.

Safe squares are denoted by “.” and mine squares by “\*”, both without the quotes.

### Output

The  $N$  lines should contain the field with the “.” characters replaced by the number of mines adjacent to that square.

### Sample Input

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

### Sample Output

```
**100
33200
1*100
```