COCI '08 Contest 4 #3 Rot

Time limit: 1.0s   **Memory limit:** 32M

Damir likes to rotate. Right now he is rotating tables of letters. He wrote an $R \times C$ table onto a piece of paper. He has also chosen an angle K, a multiple of 45, and wants to rotate his table that many degrees clockwise.

It turns out this task is a bit too hard for Damir, so help him out.

Input Specification

The first line contains two integers R and C separated by a space $(1 \le R, C \le 10)$ the number of rows and columns in Damir's table.

Each of the next R lines contains one row of Damir's table, a string of C lowercase letters. The last line contains an integer K, a multiple of 45 between 0 and 360 (inclusive).

Output Specification

Output Damir's table rotated K degrees clockwise, like shown in the examples. The output should contain the smallest number of rows necessary. Some rows may have leading spaces, but no rows may have trailing spaces.

Sample Input 1

```
3 5
damir
marko
darko
45
```

Sample Output 1

```
   d
  m a
 d a m
  a r i
   r k r
    k o
     o
```

Sample Input 2

```
3 5
damir
marko
darko
90
```

Sample Output 2

```
dmd
aaa
rrm
kki
oor
```

Sample Input 3

```
5 5
abcde
bcdef
cdefg
defgh
efghi
315
```

Sample Output 3

```
    e
   d f
  c e g
 b d f h
a c e g i
 b d f h
  c e g
   d f
    e
```