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## Rotate

X12162\_en

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To confuse his pursuers, Neo has invented a way to rotate the Matrix. However, Neo can only rotate the Matrix  $90^\circ$ ,  $180^\circ$ , or  $270^\circ$ . Help Neo compute a given rotation of the Matrix.

### Input

The input consists of several test cases. Each test case starts with the number of rows  $1 \leq n \leq 100$  and the number of columns  $1 \leq m \leq 100$  of the Matrix, as well as the number of degrees  $d$  that Neo wants to rotate the Matrix. This is followed by  $n$  rows with  $m$  integers each.

### Output

For each test case, the matrix that results from rotating the Matrix  $d$  degrees.

#### Sample input 1

```
3 4 90
9 1 2 4
2 7 2 3
7 5 1 3
```

#### Sample output 1

```
4 3 3
2 2 1
1 7 5
9 2 7
```

#### Sample input 2

```
4 2 0
9 2
4 7
1 5
3 8
```

#### Sample output 2

```
9 2
4 7
1 5
3 8
```

#### Sample input 3

```
3 3 180
9 1 2
6 2 7
8 4 4
```

#### Sample output 3

```
4 4 8
7 2 6
2 1 9
```

### Problem information

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