

Consider a  $(2k+1) \times (2k+1)$  square subarray of an integer integers matrix. Let's call the union of the square's two longest diagonals, middle column and middle row a *star*. Given the coordinates of the star's `center` in the `matrix` and its `width` , rotate it  $45 \cdot t$  degrees clockwise preserving position of all matrix elements that do not belong to the *star*.

Example

• For

```
matrix = [[1, 0, 0, 2, 0, 0, 3],
          [0, 1, 0, 2, 0, 3, 0],
          [0, 0, 1, 2, 3, 0, 0],
          [8, 8, 8, 9, 4, 4, 4],
          [0, 0, 7, 6, 5, 0, 0],
          [0, 7, 0, 6, 0, 5, 0],
          [7, 0, 0, 6, 0, 0, 5]]
```

width = 7 , center = [3, 3] and t = 1 , the output should be

```
starRotation(matrix, width, center, t) = [[8, 0, 0, 1, 0, 0, 2],
                                           [0, 8, 0, 1, 0, 2, 0],
                                           [0, 0, 8, 1, 2, 0, 0],
                                           [7, 7, 7, 9, 3, 3, 3],
                                           [0, 0, 6, 5, 4, 0, 0],
                                           [0, 6, 0, 5, 0, 4, 0],
                                           [6, 0, 0, 5, 0, 0, 4]]
```

• For

```
matrix = [[1, 0, 0, 2, 0, 0, 3],
          [0, 1, 0, 2, 0, 3, 0],
          [0, 0, 1, 2, 3, 0, 0],
          [8, 8, 8, 9, 4, 4, 4],
          [0, 0, 7, 6, 5, 0, 0]]
```

width = 3 , center = [1, 5] and t = 81 , the output should be

```
starRotation(matrix, width, center, t) = [[1, 0, 0, 2, 0, 0, 0],
                                           [0, 1, 0, 2, 3, 3, 3],
                                           [0, 0, 1, 2, 0, 0, 0],
                                           [8, 8, 8, 9, 4, 4, 4],
                                           [0, 0, 7, 6, 5, 0, 0]]
```

Input/Output

• [execution time limit] 4 seconds (js)

• [input] array.array.integer matrix

A two-dimensional array of integers.

Guaranteed constraints:

```
3 ≤ matrix.length ≤ 15 ,
3 ≤ matrix[i].length ≤ 15 ,
matrix[i].length == matrix[j].length ,
0 ≤ matrix[i][j] ≤ 99 .
```

• [input] integer width

An odd integer representing the star's width. It equals the length of the sides of the bounding square for the star.

Guaranteed constraints:

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