

Day 200 of factorial and power.

2D array questions -

rotation \Rightarrow logic

0 ¹	0 ¹	1 ¹	0 ¹
1 ¹	1 ¹	1 ¹	0 ¹
0	0	0	0

Ques

0	0	1
1	0	1
1	1	0

\downarrow

1	0	1
0	1	0
1	0	1

$c = \cancel{0} \cancel{1} \cancel{2} \cancel{3}$

0	1	0
1	0	1
0	1	0

$c = \cancel{0} \cancel{1} \cancel{2} \cancel{3} \ 4$

B1 \rightarrow 3 are right \rightarrow 6 wrong

B2 \rightarrow Right \rightarrow 6 \rightarrow wrong 3

	0	1	2	3
0	1	2	3	4
1	5	6	7	8
2	9	10	11	12
3	13	14	15	16

arr

\Rightarrow

	0	1	2	3
0	13	9	5	1
1	14	10	6	2
2	15	11	7	3
3	16	12	8	4

res

$0 + n \rightarrow$ 3rd col

1st row \rightarrow 2 col

i^{th} row \rightarrow $n - 1 - i$ col

col \rightarrow row

```
int res[n][n] = new int[n][n];
```

```
for(int i=0; i<n; i++) {
```

```
    for(int j=0; j<n; j++) {
```

```
        res[j][n-1-i] = arr[i][j];
```

```
    }
```

```
}
```

	0	1	2	3
0	1	2	3	4
1	5	6	7	8
2	9	10	11	12
3	13	14	15	16

arr

→

	0	1	2	3
0	16	15	14	13
1	12	11	10	9
2	8	7	6	5
3	4	3	2	1

res

Row Row remains row

arr

res

0th row

3rd row

$n-1$

1 row

2 row

$n-1-1$

2 row

1 row

$n-1-2$

3 row

0 row

$n-1-3$

i th row

$n-1-i$ th row

j col

$n-1-j$ th col

$$res[n-1-i][n-1-j] = arr[i][j];$$

Que

	0	1	2	3	
0	1	5	8	10	d_3
1		2	6	9	d_2
2			3	7	d_1
3				4	d_0

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

```
for(int d=0; d<n; d++) {
```

```
    for(int i=0, j=d; j<n; i++, j++) {
```

```
        syso(arr[i][j]);
```

~