

Celebrity party

① $O(n^2)$
Brute Force

	0	1	2	3	4
0	✓	X	✓	✓	✓
1	✓	✓	X	✓	X
2	✓	X	✓	✓	X
3	X	X	X	✓	X
4	✓	✓	✓	✓	✓

②

③ 2 pointer

0	1	2	3	4
			↑	
			B	
			↑	
			A	

~~Queue~~ Boundary Traversal

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20

1 2 3 4 8 12 16 20 19 18 17 13 9 5

For top wall

```
for(i=0; i < a[0].length; i++)  
    syso ( a[0][i] );
```

right wall

```
for(i=1; i < a.length-1; i++)  
    syso ( a[i][a[0].length-1] );
```

bottom wall

```
for(i = a[0].length-1; i >= 0; i--)  
    syso ( a[a.length-1][i] );
```

left wall

```
for(i = a.length-2; i > 0; i--)  
    syso ( a[i][0] );
```

Ques Rotate $k = 12$

1, 2, 3, 4, 5

\Rightarrow 4, 5, 1, 2, 3

① $k = k \% \text{a.length}$

① New array

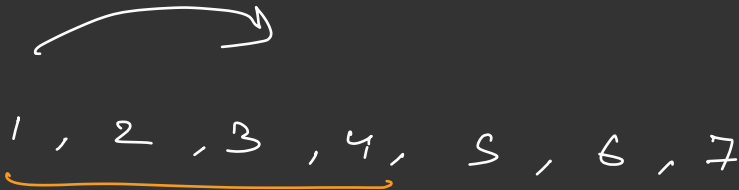

res

$$\text{res}[i] = a[(i - 2) \% n]$$

② Queue



3 times


1, 2, 3, 4, 5, 6, 7

4, 3, 2, 1, 7, 6, 5

\Rightarrow 5, 6, 7, 1, 2, 3, 4

reverse (a[], st, end)

while (st < end) {

int t = a[st];

a[st] = a[end];

a[end] = t;

st++;

end--;

}

rotate (int arr[], int k) {

k = k % arr.length;

reverse(0, n-k-1);

reverse(n-k, n-1);

reverse(0, n-1);

}

k=3

1, 2, 3, 4, 5, 6, 7

4, 5, 6, 7, 1, 2, 3

3, 2, 1, 7, 6, 5, 4
