

4.

Input

10 (the number of the rows)

```
0 0 0 0 1 1 0 0 0 1 0 1 0 1 1 1 0 0 1 1
1 0 1 0 0 0 0 0 1 1 0 0 0 0 1 0 0 1 0 0
0 1 1 1 1 1 1 0 1 0 1 0 1 0 0 0 0 0 1 0
0 0 0 0 1 1 0 0 0 0 1 0 0 0 1 1 1 0 1 1
1 0 0 1 0 0 0 0 0 0 1 1 1 0 1 1 1 0 1 1
1 1 1 1 0 1 0 0 0 0 0 0 0 0 1 0 0 1 1 0 1
1 1 0 0 0 0 1 0 0 0 0 1 1 0 0 0 0 1 0 1
0 1 0 0 0 1 1 0 0 0 0 1 1 0 0 0 0 1 1 1
0 0 1 1 1 0 0 1 0 1 0 0 1 0 0 0 1 1 1 0
1 0 1 0 1 0 1 1 1 1 0 0 1 0 1 0 0 0 0 1 (every row)
```

=====

Output

-----4 neighbors-----

```
0 0 0 0 6 6 0 0 0 10 0 12 0 15 15 15 0 0 20 20
1 0 4 0 0 0 0 0 10 10 0 0 0 15 0 0 19 0 0
0 4 4 4 4 4 0 10 0 11 0 14 0 0 0 0 17 0
0 0 0 0 4 4 0 0 0 11 0 0 17 17 17 0 17 17
2 0 0 2 0 0 0 0 0 11 11 11 0 17 17 17 0 17 17
2 2 2 2 0 7 0 0 0 0 0 16 0 17 17 0 17
2 2 0 0 0 8 0 0 0 13 13 0 0 17 17 0 17
0 2 0 0 0 8 8 0 0 13 13 0 0 17 17 17
0 0 5 5 5 0 0 9 0 9 0 13 0 17 17 17 0
3 0 5 0 5 0 9 9 9 9 0 13 0 18 0 0 0 0 21
```

-----8 neighbors-----

```
0 0 0 0 3 3 0 0 0 4 0 5 0 7 7 7 0 0 4 4
1 0 1 0 0 0 0 0 4 4 0 0 0 7 0 0 4 0 0
0 1 1 1 1 1 1 0 4 0 4 0 6 0 0 0 0 4 0
0 0 0 0 1 1 0 0 0 4 0 0 4 4 4 0 4 4
1 0 0 1 0 0 0 0 0 4 4 4 0 4 4 4 0 4 4
1 1 1 1 0 1 0 0 0 0 0 4 0 0 4 4 0 4
1 1 0 0 0 0 1 0 0 0 4 4 0 0 0 4 0 4
0 1 0 0 0 1 1 0 0 0 4 4 0 0 0 4 4 4
0 0 1 1 1 0 0 1 0 1 0 4 0 0 0 4 4 0
2 0 1 0 1 0 1 1 1 1 0 4 0 8 0 0 0 0 4
```