N Queens ←

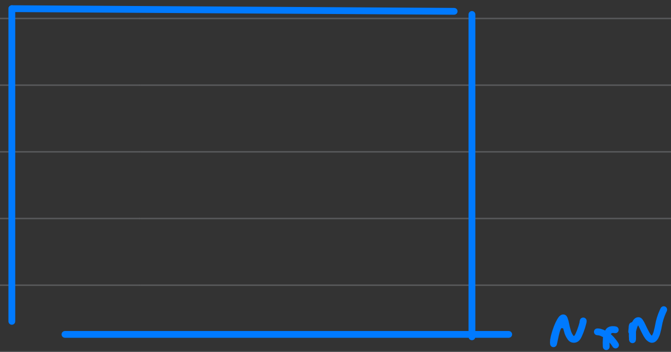
- for loop
- Nqueen with bitmask

Q: N Knights

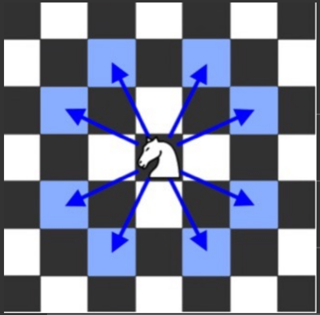
3 - 36

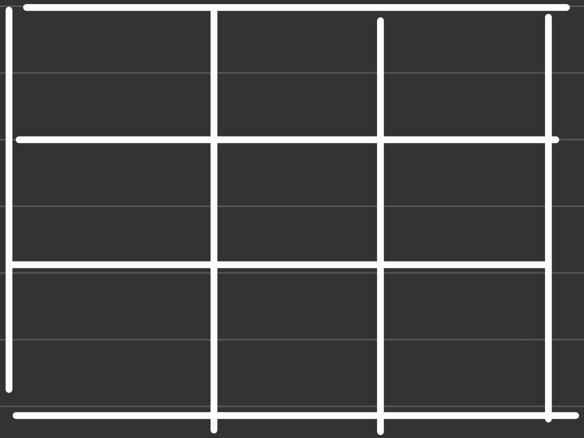
2 - 6

4 - 412



N knights ← no one attacks other





nested loop

2

counter

3x3

initially

$sr = 0$
$sc = 0$

$sr, sc+1$

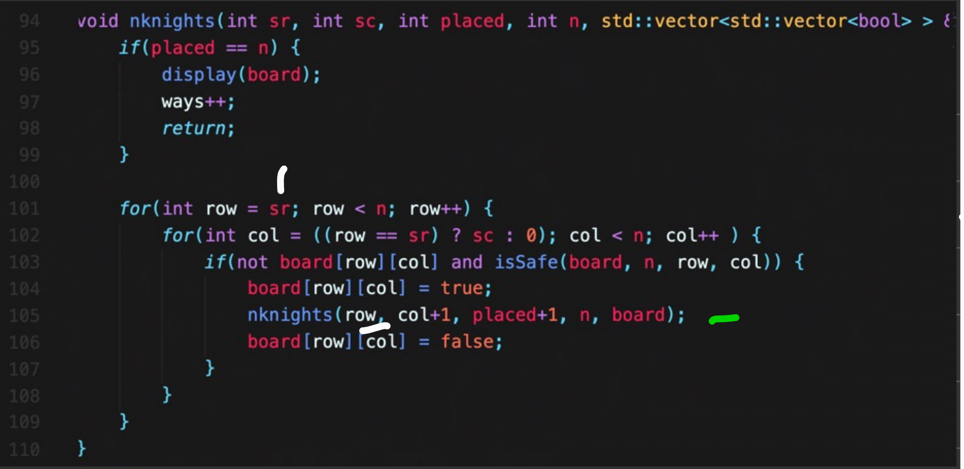
$sr, sc+1$

f (sr, sc)

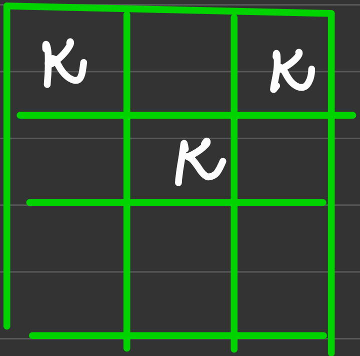
sr → start row

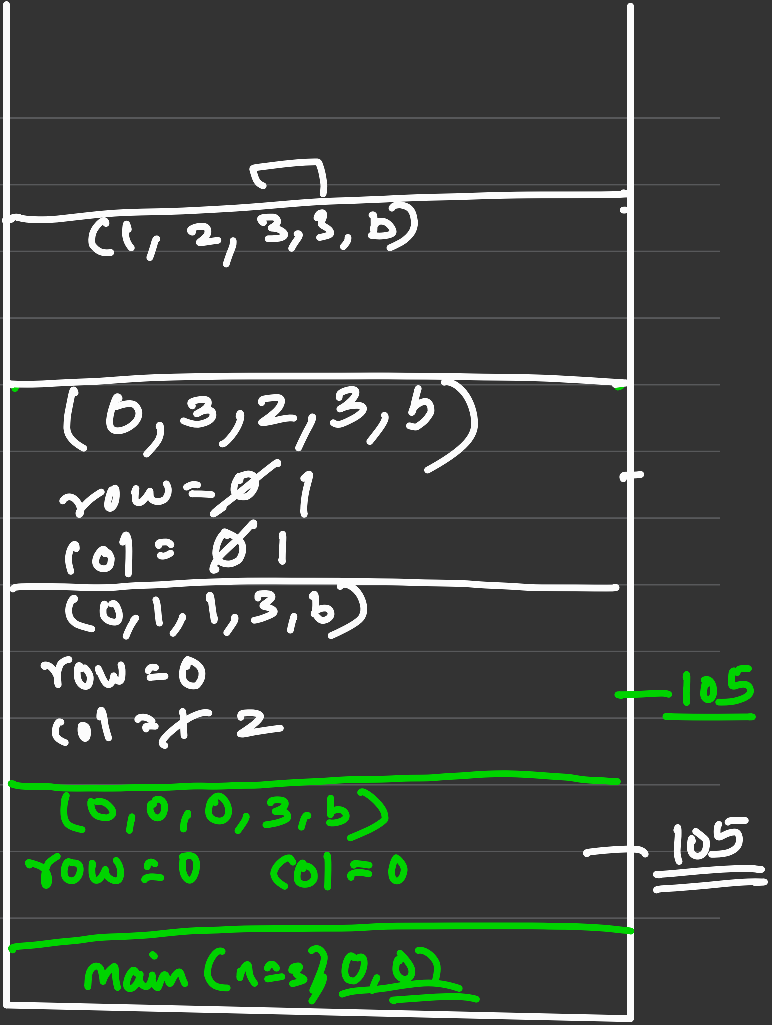
sc → start col

```
for(row=sr; row<n; row++){
  for(col =
```



```cpp
94  void nknights(int sr, int sc, int placed, int n, std::vector<std::vector<bool> > &
95      if(placed == n) {
96          display(board);
97          ways++;
98          return;
99      }
100
101     for(int row = sr; row < n; row++) {
102         for(int col = ((row == sr) ? sc : 0); col < n; col++ ) {
103             if(not board[row][col] and isSafe(board, n, row, col)) {
104                 board[row][col] = true;
105                 nknights(row, col+1, placed+1, n, board);
106                 board[row][col] = false;
107             }
108         }
109     }
110 }
```





(1, 2, 3, 3, b)

(0, 3, 2, 3, b)
row = ~~0~~ 1
col = ~~0~~ 1

(0, 1, 1, 3, b)
row = 0
col = ~~1~~ 2

105

(0, 0, 0, 3, b)
row = 0 col = 0

105

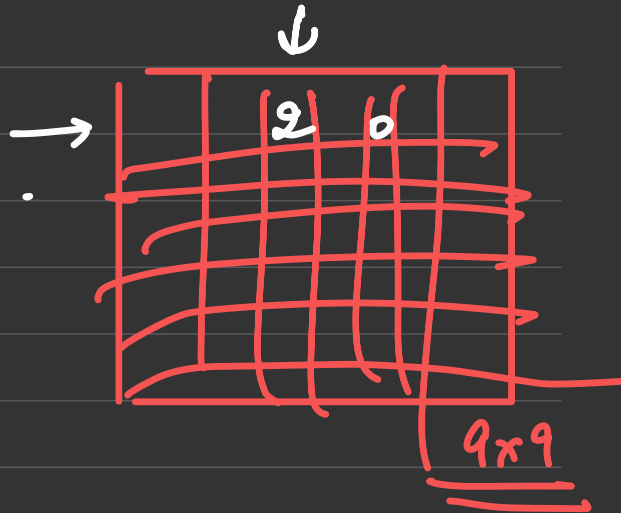
main (n=3) 0, 0)

N=3

way = ~~0~~ 1

```
int y = 2;
for (int x = y ; x < 5 ; x++)
```

1	2	3
4	5	6
7	8	9



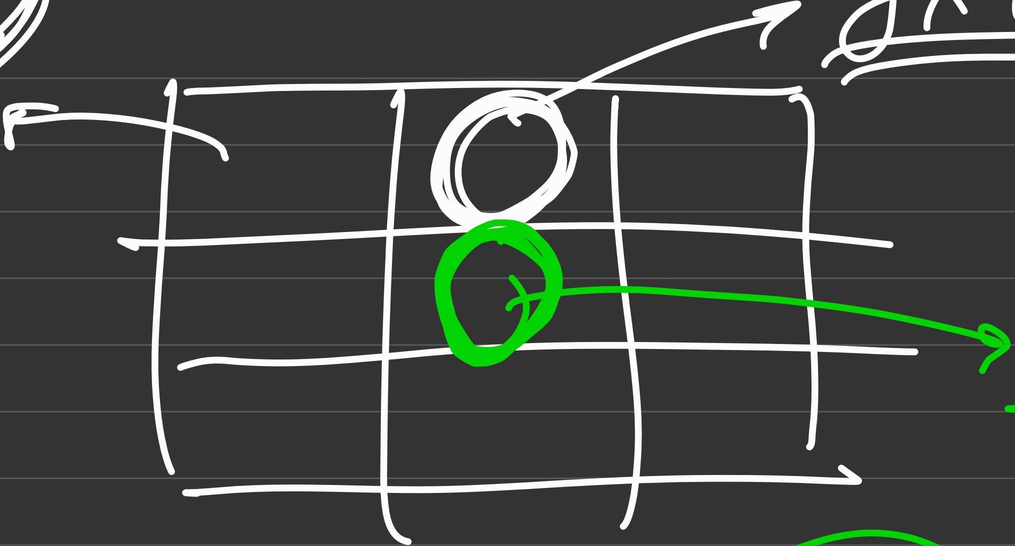
1 → unvisited

2 ← direct touch

indirect touch

$x + y$

?



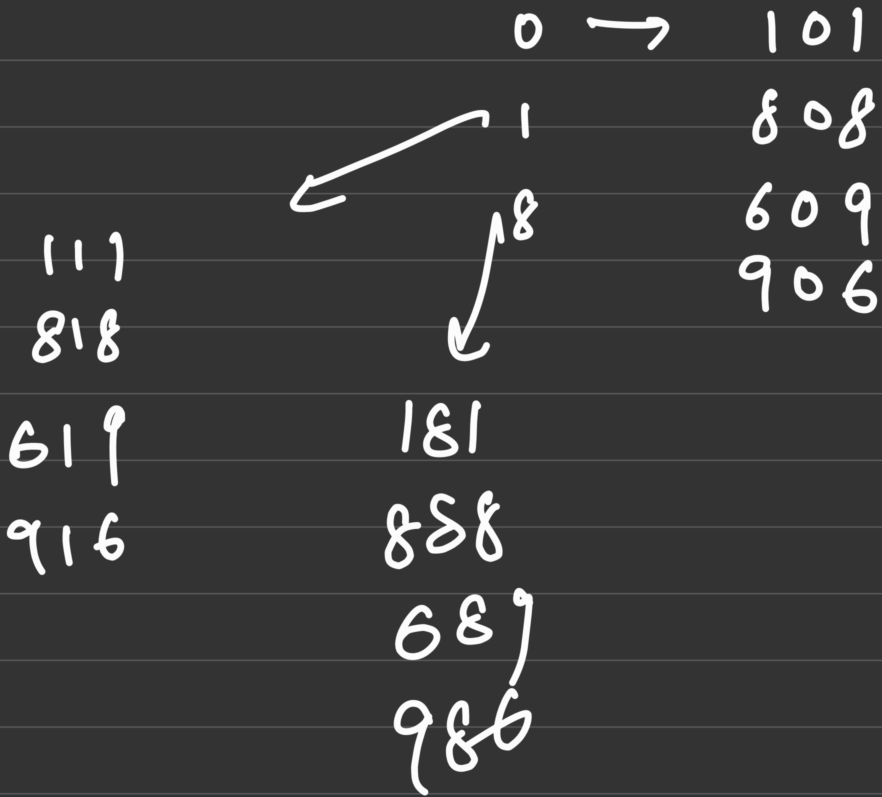
$y \times y$

2

$4x + 4y = 2$

$$\underbrace{8\,\boxed{0\,8\,1\,8\,0}\,8}_{n}$$ ✓✓

n=3



0 → 101
808
609
906

1 → 111
818
619
916

8 → 181
888
689
986

$f(n) \rightarrow f(n-2)$

1 [ ] 1

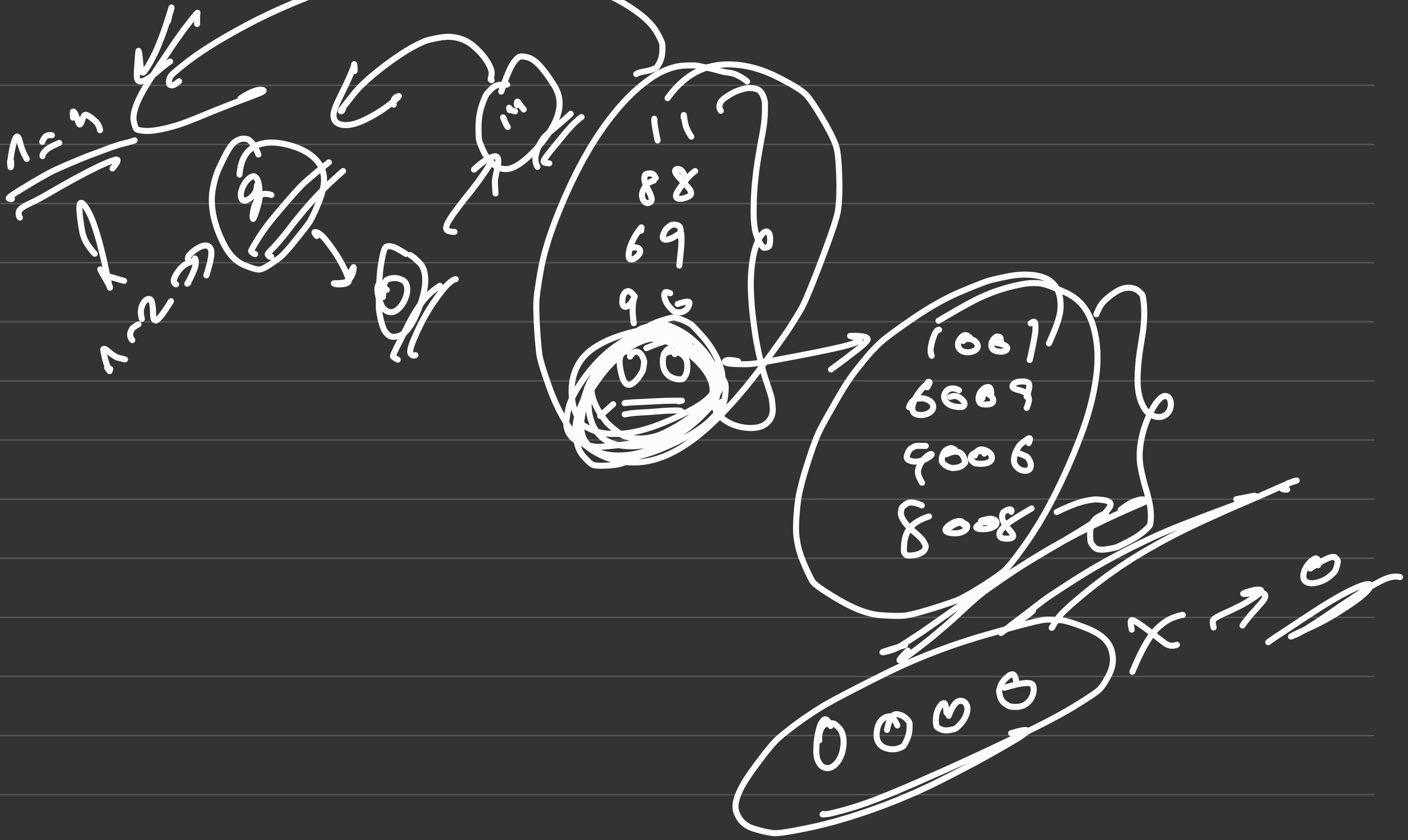
8 [ ] 8

6 [ ] 9

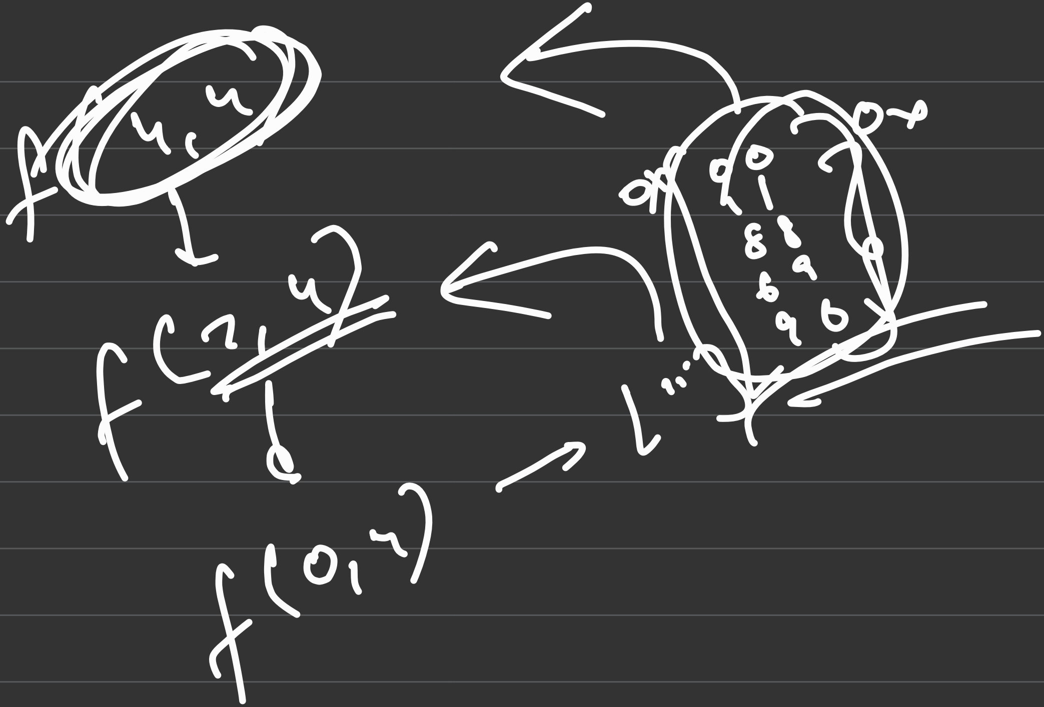
9 [ ] 6

return all n length

180° r.s



n=4
n=2
9
0
11
88
69
96
00
1001
6689
9006
8008
0000
x



f(4,4)
f(2,4)
0
f(0,4)
0
8
9
6