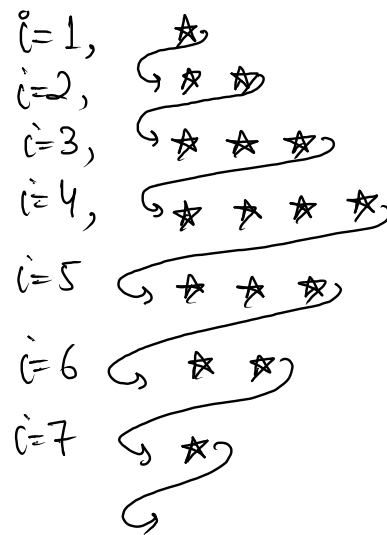


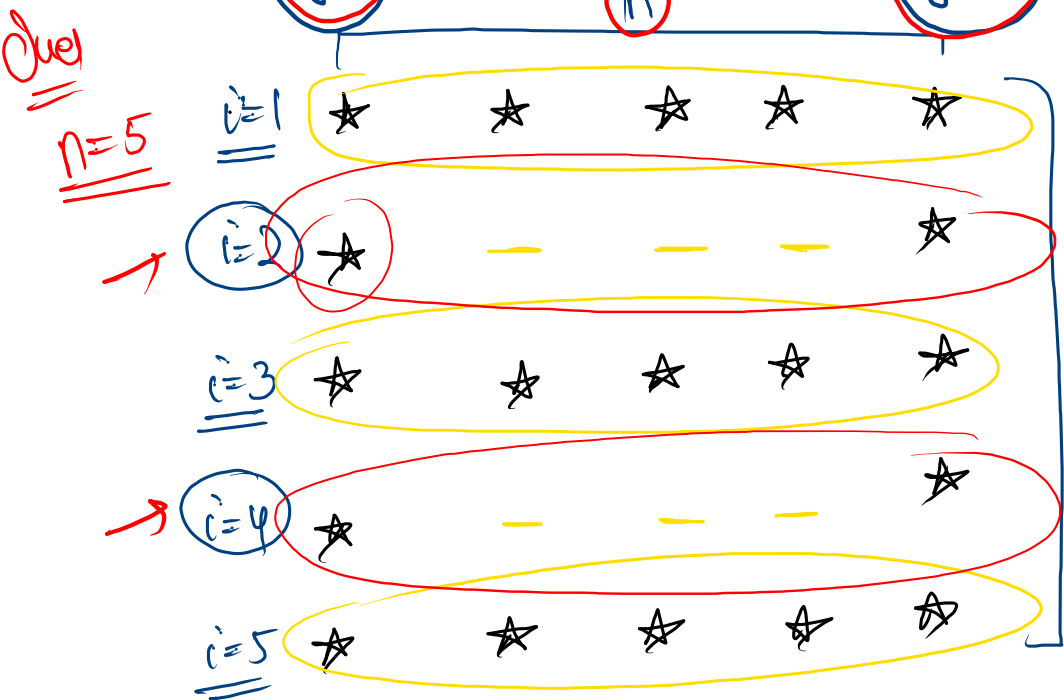
(n is always odd)

$$\text{st} = \left(\frac{n}{2} + 1\right)$$

st = 1 2 3 4 3 2 1 0

```
int n = scn.nextInt();
int st = 1;
for (int i = 1; i <= n; i++) { // no of rows
    for (int j = 1; j <= st; j++) {
        System.out.print("*");
    }
    System.out.println();
    if (i < n / 2 + 1) {
        st++;
    } else {
        st--;
    }
}
```



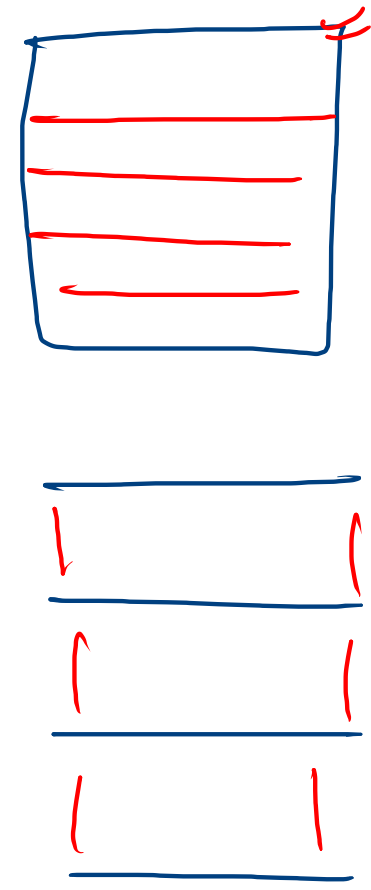


odd i = all stars (n)
 = even i = first & last \times star
 use space

```

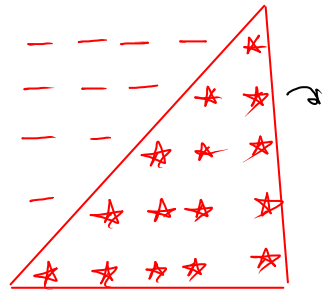
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();

for (int i = 1; i <= n; i++) { // no of rows
    if (i % 2 == 0) { // even
        for (int j = 1; j <= n; j++) {
            if (j == 1 || j == n) {
                System.out.print("★\t");
            } else {
                System.out.print("\t");
            }
        }
    } else { // odd
        for (int j = 1; j <= n; j++) {
            System.out.print("★\t");
        }
    }
    System.out.println();
}
  
```



Ques

n=5



n=5

i=1

i=2

i=3

i=4

i=5

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

sp	st
4	1
3	2
2	3
1	4
0	5

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    int k = 1;
    for (int i = 1; i <= n; i++) { // no of rows
        // for spaces
        for (int j = 1; j <= n - i; j++) {
            System.out.print(" ");
        }

        // for stars
        for (int j = 1; j <= i; j++) {
            System.out.print(k++);
            // k++;
        }

        System.out.println();
    }
}
```

// no. of spaces
// no. of stars

$$\begin{aligned} sp &= n - i \\ st &= i \end{aligned}$$

Duel

