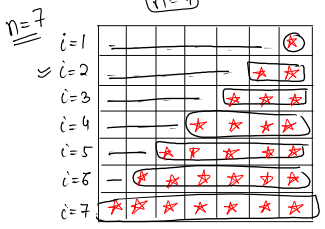
Pattern_5

n=7



sp	st	
6	1	sp=7-1, st=1
5	2	sp=7-2, st=2
4	3	sp=7-3, st=3
3	4	sp=7-4, st=4
2	5	sp=7-5, st=5
1	6	sp=7-6, st=6
0	7	sp=7-7, st=7

sp = n-i , st = i

no. of spaces in each line

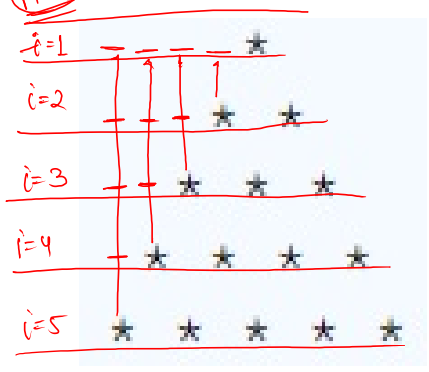
no. of stars in each line

```
for (int i = 1; i <= n; i++) {  // no of rows
    // for spaces
    for (int j = 0; j < n - i; j++) {
        System.out.print(" ");
    }

    // for stars
    for (int j = 0; j < i; j++) {
        System.out.print("*");
    }

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

n=5, i=3 → n-i

Quel n=5

outer loop

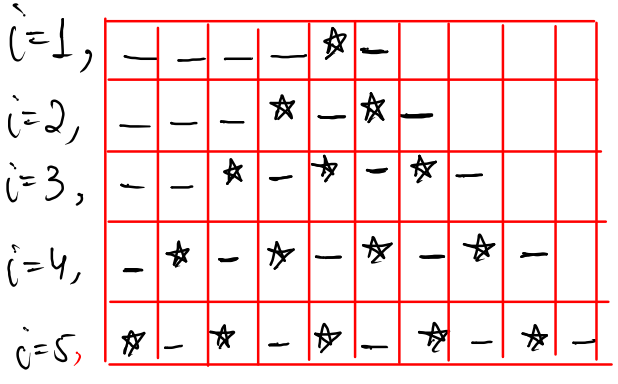


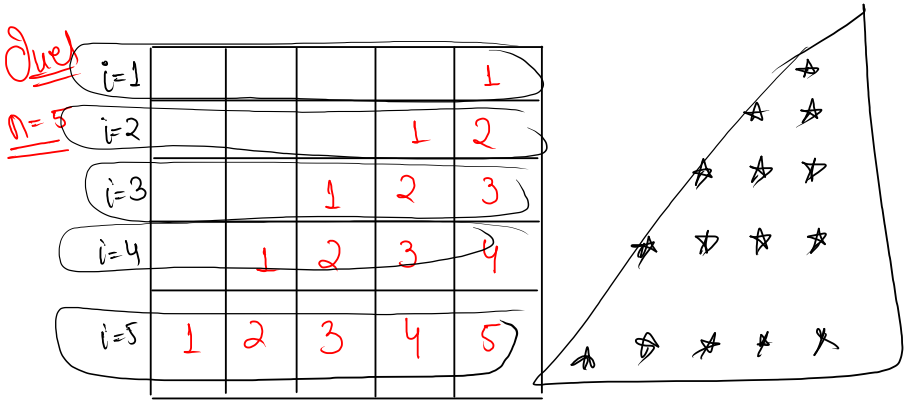
sp	st	
4	1	sp=5-1, st=1
3	2	sp=5-2, st=2
2	3	sp=5-3, st=3
1	4	sp=5-4, st=4
0	5	sp=5-5, st=5

n=5, i=2

sp = n-i , st = i

```
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("* ");
    }

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






```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();

    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 k = 1; k <= i; k++) {
            System.out.print(k);
        }

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

Ques
n=5

i=1	1	2	3	4	5
i=2	–	1	2	3	4
i=3	–	–	1	2	3
i=4	–	–	–	1	2
i=5	–	–	–	–	1

n=5

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

```java
for (int i = n; i >= 1; i--) {  // no of rows
    // for spaces
    for (int j = 1; j <= n - i; j++) {
        System.out.print(" ");
    }

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

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

Qwe)

n=7

1			
1	2		
1	2	3	
1	2	3	4
1	2	3	
1	2		
1			

Input is always odd no.

H.W

1)

2) ladder