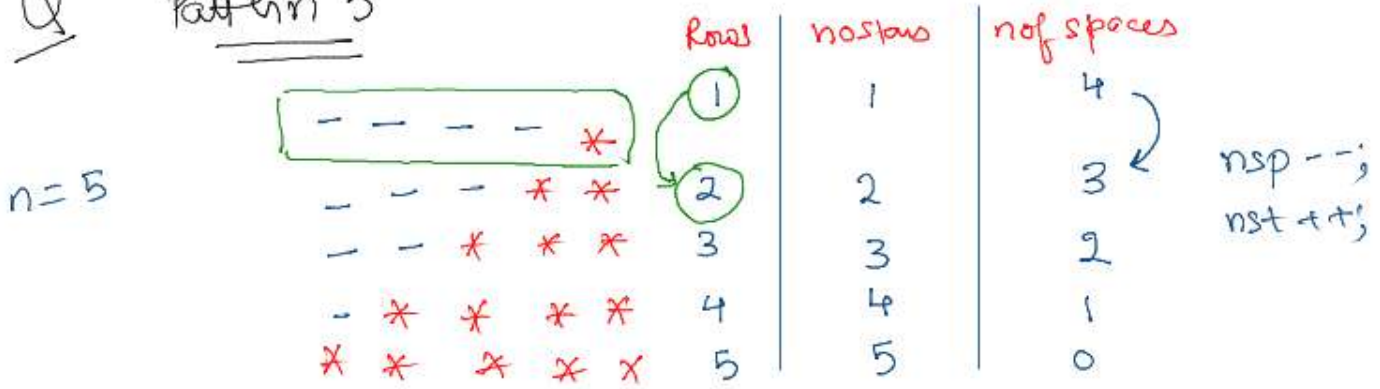
Q Pattern 5



→ int nsp = n-1;
int nst = 1;

row=1

1 <=5

```
for( int row=1; row<=n; row++){
    loop for space {
        for( int sp=1; sp<=nsp; sp++){
            Sysо(" ");          // to print spaces
        }
    }
    loop for stars {
        for ( int st=1; st<=nst; st++){
            Sysо("*");
        }
    }
    Sysо( );
    nsp--;
    nst++;
}
```

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

int nsp= n-1;
int nst=1;

for(int row =1;row<=n;row++){
    for(int sp =1;sp<=nsp;sp++){
      System.out.print(" ");
    }

    for(int st = 1;st <= nst;st++){
      System.out.print("*");
    }
    nsp--;
    nst++;
    System.out.println();
}

/* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class shc
```

n = 5

nsp = ~~4~~ 3

nst = ~~1~~ 2

row = 1

sp = 1

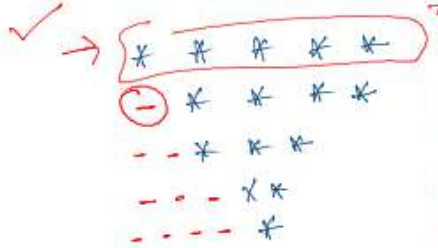
st = 1

- - - - *2

Qu

Pyramid

row	nst	nsp
1	1	4
2	2	3
3	3	2
4	4	1
5	5	0



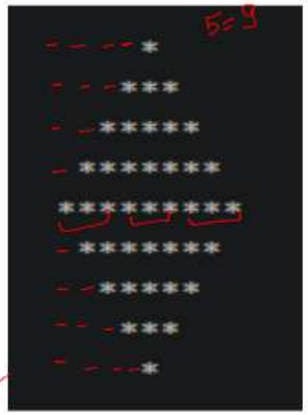
row	n = nst	nsp
1	5	0
2	4	1
3	3	2
4	2	3
5	1	4

nst = n

nsp = 0

n=5

5 = 9
= 5*2-1



row	nst	nsp
1	1	4
2	3	3
3	5	2
4	7	1
5	9	0
6	7	1
7	5	2
8	3	3
9	1	4

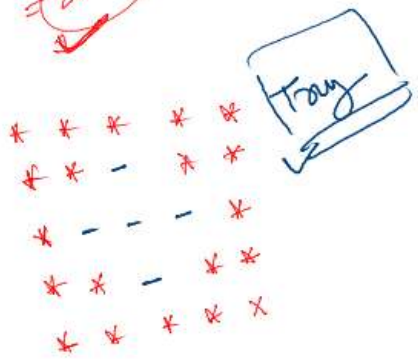
```
if( row <= n ){
    nst += 2;
    nsp -= 1;
}
else{
    nst -= 2;
    nsp += 1;
}
```

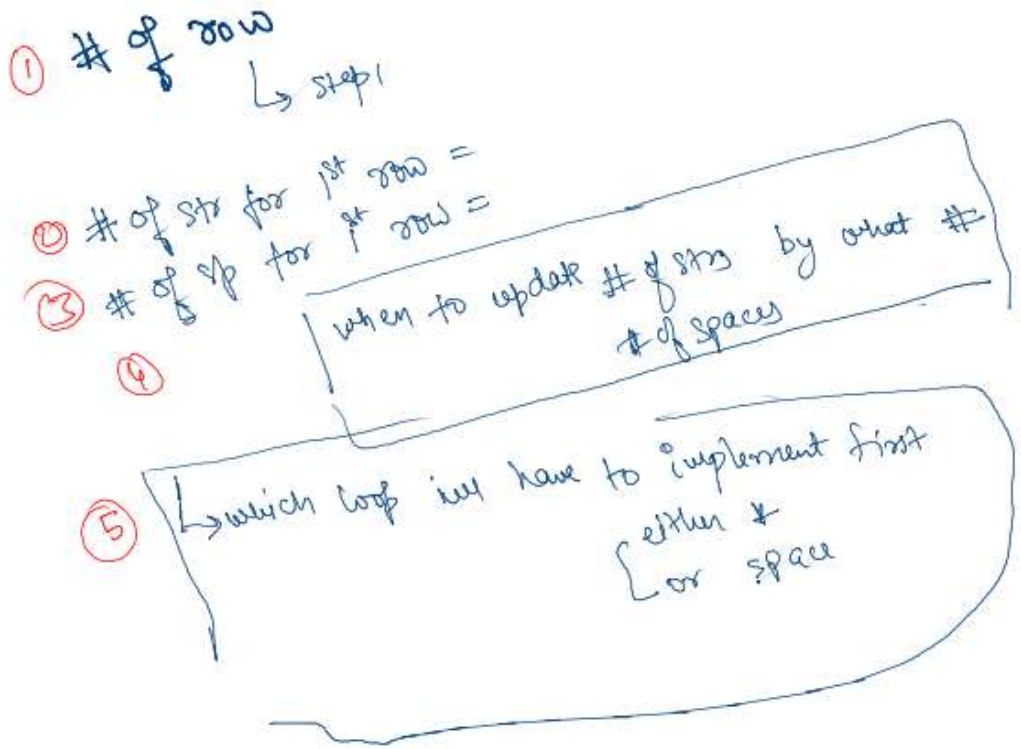
```
nsp++;
nst--;
```

for(row 1 to 2*n-1){

n=5 → 9 = 2*5-1
n=3 → 5 = 2*3-1
n=1 → 1 = 2*1-1
n=7 → 13 = 2*7-1
= 2*n-1

}





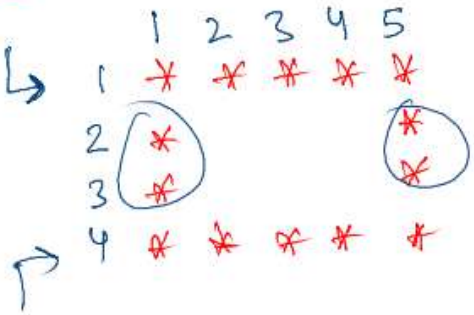

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();

    int nst= 1;
    int nsp= n-1;

    for(int row = 1 ;row<= 2*n -1;row++){
        for(int sp=1;sp<=nsp;sp++){
            System.out.print(" ");
        }
        for(int st=1;st<=nst;st++){
            System.out.print("*");
        }

        if(row<n){
            nst +=2;
            nsp -=1;
        }else{
            nst -=2;
            nsp +=1;
        }
        System.out.println();
    }
```

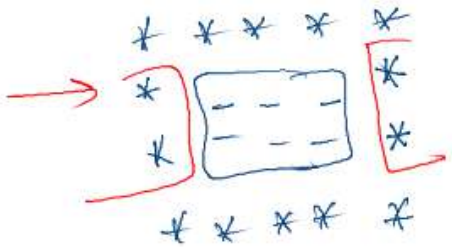
Hollow Rectangle

Ques

m = 5

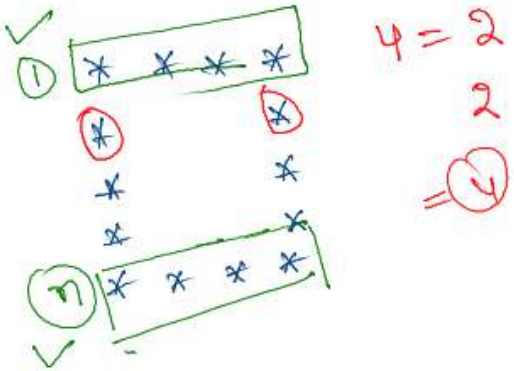
n = 4





col - 2

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

    for(int i=1;i<=row;i++){
        if(i==1 || i==row){
            for(int j=1;j<=col;j++){
                System.out.print("*");
            }
        }else{
            System.out.print("*");
            for(int j=1;j<=col-2;j++){
                System.out.print(" ");
            }
            System.out.print("*");
        }
        System.out.println();
    }
```

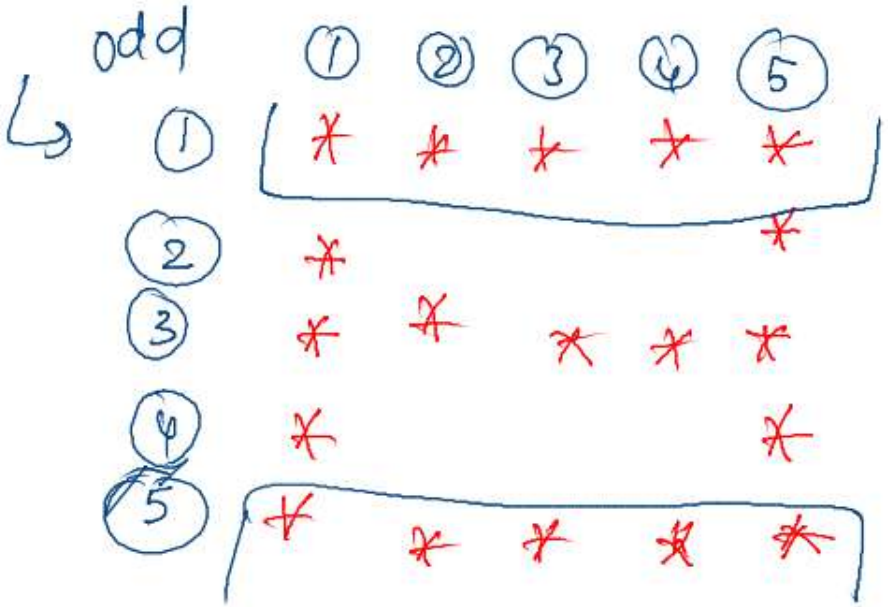


Same Solution as above

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

    for(int i=1;i<=row;i++){
        if( i==row){
            for(int j=1;j<=row;j++){
                System.out.print("*");
            }
        }else{
            System.out.print("*");
            for(int j=1;j<=row-2;j++){
                System.out.print(" ");
            }
            System.out.print("*");
        }
        System.out.println();
    }
    /* Enter your code here. Read input from STDIN.
}
```

Ques

else



#5 almost same just slight modification:

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

    for(int i=1;i<=row;i++){
        if(i%2==1){
            for(int j=1;j<=row;j++){
                System.out.print("*\t");
            }
        }else{
            System.out.print("*");
            for(int j=1;j<=row-1;j++){
                System.out.print("\t");
            }
            System.out.print("*\t");
        }
        System.out.println();
    }
```