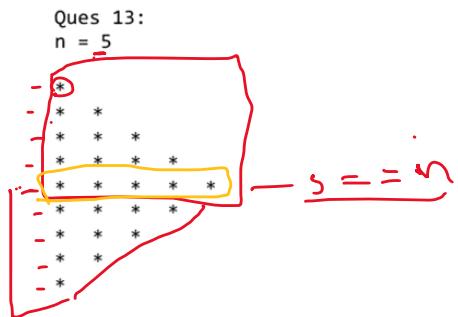


$$(row \leq n*2-1) \quad start = 1$$

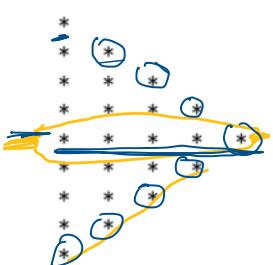


// Star
[

"Next line

```
[ if(row < n) start++  
else start--  
row++  
Sout()
```

Ques 13:
n = 5



$\rightarrow *$
 $\rightarrow * *$
 $\rightarrow * * *$
 $\rightarrow * * * *$
 $\rightarrow * * * *$
 $\rightarrow * * *$
 $\rightarrow *$

1 <= 9
2 <= 9
3 <= 9
4 <= 9
5 <= 9
6 <= 9
7 <= 9
8 <= 9
9 <= 9
10 <= 9

i = 1 to 5
3 < 5
4 < 5
5 < 5
6 < 5
7 < 5
8 < 5
9 < 5
10 < 5
start = 1 2 3 4 5
row = 1 2 3 4 5
8 7 6 5 4
3 2 1 0
// Next line prep
row++;
if (row < n){
 start++;
} else {
 start--;
}
System.out.println();

start = 1 2 3 4 5
row = 1 2 3 4 5
8 7 6 5 4
3 2 1 0

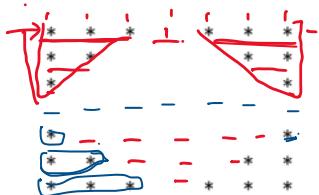
$$n*2-3$$

$$n*2 = 10-3$$

$$n = 5$$

$$\text{space} = 1$$

$$\text{start} = n-2$$



$row < n-1$

```
while (row <= n*2-3) {  
    // Star
```

start = 1 2 3 4 5
space = 1 2 3 4 5

```

while (row<=n*2-3) {
    //Star
    int i = 1;
    while (i<=star) {
        System.out.print("* ");
        i++;
    }
    // Space
    int j = 1;
    while (j<=space) {
        System.out.print(" ");
        j++;
    }
    // Star
    int k = 1;
    while (k<=star) {
        System.out.print("* ");
        k++;
    }

    // Next line prep
    if(row<n-1){
        space +=2;
        star--;
    }else{
        space -=2;
        star++;
    }
    row++;
    System.out.println();
}

```

stars = ~~XXXXX~~
 space = ~~X X X~~
~~X X~~
 row = ~~X X X X~~

 1 < 2
 2 < 4
 3 < 4
 4 < 7
 5 < 7

→ * * * - * * * *
 → * * - - - - * *
 → * - - - - - - *
 → - - - - - - - -
 → * - - - - - - -