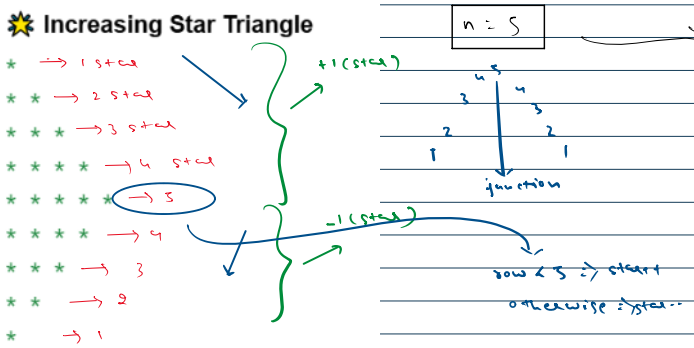
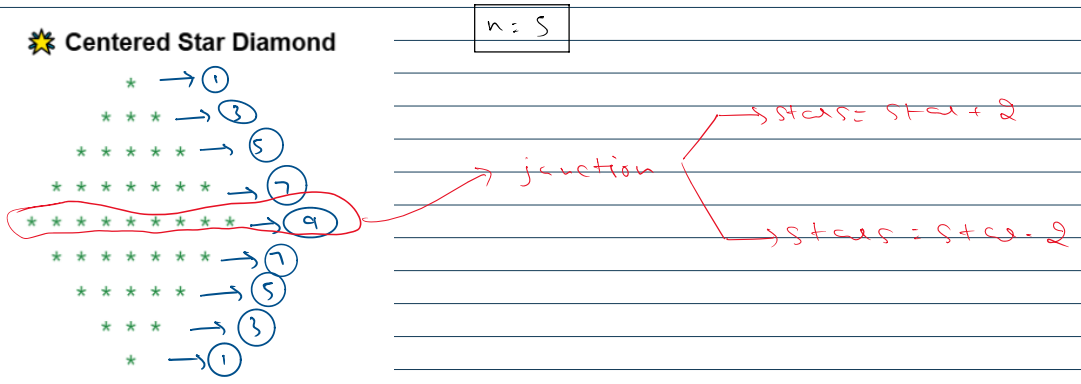
Increasing Star Triangle

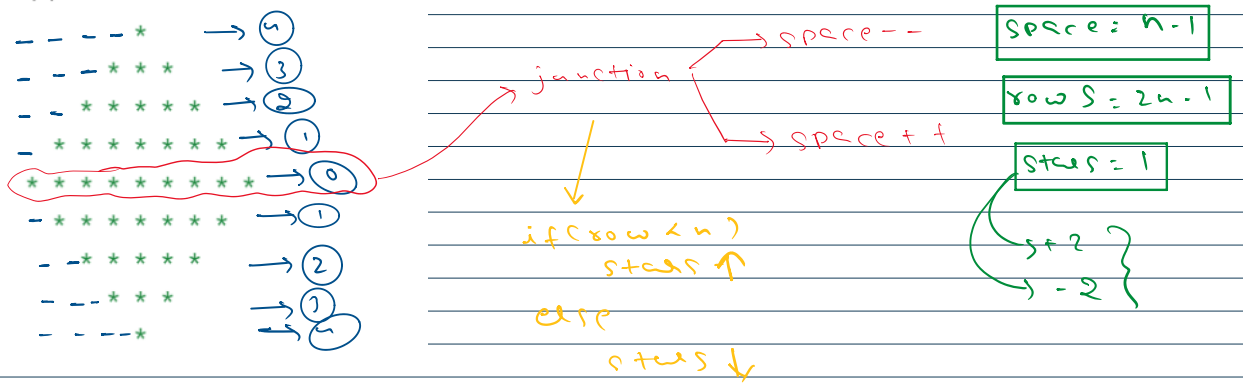



```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        int row = 1;
        int stars = 1;

        while(row <= 2*n - 1){

            int i = 1;
            while(i <= stars){
                System.out.print("* ");
                i++;
            }

            if(row < n){
                stars++;
            }
            else{
                stars--;
            }

            System.out.println();
            row++;

        }
    }
}
```

Centered Star Diamond



Centered Star Diamond



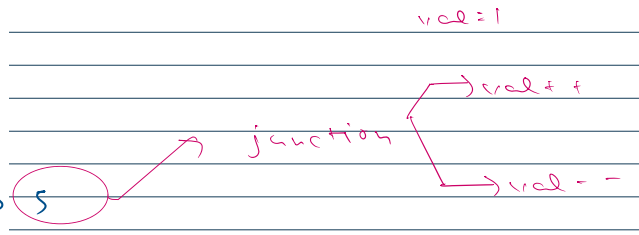

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        int row = 1;
        int space = n - 1;
        int star = 1;

        while(row <= 2*n-1){
            System.out.println();
            row++;

            int i = 1;
            while(i <= space){
                System.out.print("\t");
                i++;
            }

            int j = 1;
            while(j <= star){
               System.out.print("*\t");
                j++;
            }

            if(row < n){
                star = star + 2;
                space = space - 1;
            }
            else{
                star = star - 2;
                space = space + 1;
            }
        }
    }

}
```

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        int space = n-1;
        int star = 1;

       for(int row=1; row<=2*n-1; row++){
```

```
        for(int j=1; j<=space; j++){
            System.out.print("  ");
        }
        for(int k=1; k<=star; k++){
            System.out.print("* ");
        }

        if(row < 5){
            star = star + 2;
            space = space - 1;
        }
        else{
            star = star - 2;
            space = space + 1;
        }
        System.out.println();
    }
  }

}
```

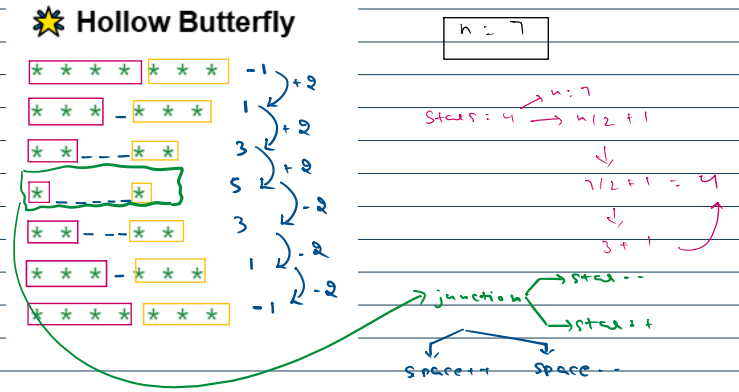
Number Diamond

```
        1
      2 2 2
    3 3 3 3 3
  4 4 4 4 4 4 4
5 5 5 5 5 5 5 5 5
  4 4 4 4 4 4 4
    3 3 3 3 3
      2 2 2
        1
```




```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        int row = 1;
        int space = n - 1;
        int star = 1;
        int val = 1;

        while(row <= 2*n-1){
            System.out.println();
            row++;

            int i = 1;
            while(i <= space){
                System.out.print("\t");
                i++;
            }

            int j = 1;
            while(j <= star){
                System.out.print(val + "\t");
                j++;
            }

            if(row < n){
                star = star + 2;
                space = space - 1;
                val++;
            }
            else{
```

```
            star = star - 2;
            space = space + 1;
            val--;
        }
    }
  }

}
```




```
import java.util.Scanner;

public class Main {
    public static void main(String[]
args) {
        Scanner sc = new
Scanner(System.in);
        int n = sc.nextInt();

        int row = 1;
        int star = n/2 + 1;
        int space = -1;

        while(row <= n){

            int i = 1;
            while(i <= star){
                System.out.print("* ");
                i++;
            }

            int j = 1;
            while(j <= space){
                System.out.print(" ");
                j++;
            }

            i = 1;
            if(row == 1 || row == n){
                while(i <= star-1){
                    System.out.print("* ");
                    i++;
                }
            }
            else{
                 while(i <= star){
                    System.out.print("* ");
                    i++;
                }
            }


            if(row <= n/2){
                star--;
```

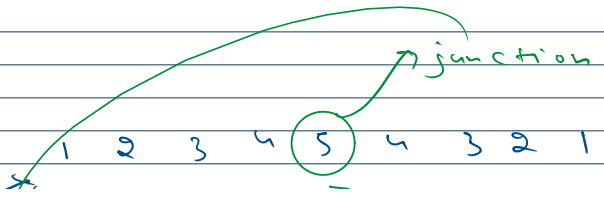
```
            space = space + 2;
        }
        else{
            star++;
            space = space - 2;
        }
        row++;
        System.out.println();
    }
  }

}
```

Number Pyramid

```
    1
    2 3 4
   5 6 7 8 9
 10 11 12 13 14 15 16
 17 18 19 20 21 22 23 24 25
```

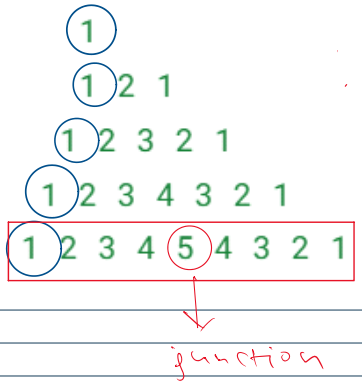
```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        int stars = 1;
        int row = 1;
        int spaces = n-1;

        int val = 1;

        while(row <= n){

            int k = 1;
            while(k <= spaces){
                System.out.print("  ");
                k++;
            }

            int j = 1;
            while(j <= stars){
                System.out.print(val + " ");
                val++;
                j++;
            }
            System.out.println();
            stars = stars + 2;
            row++;
            spaces--;
        }

        sc.close();
    }
}
```

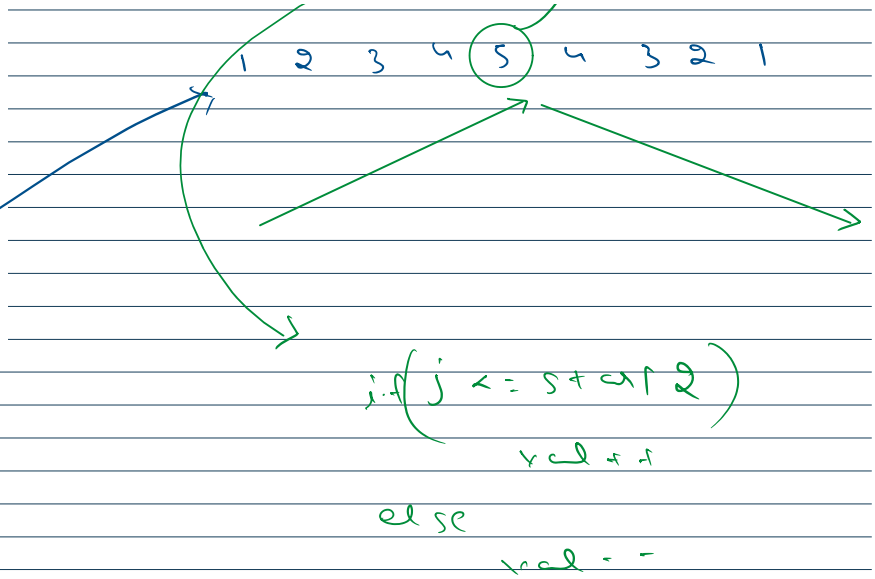
Symmetric Number Pyramid



1

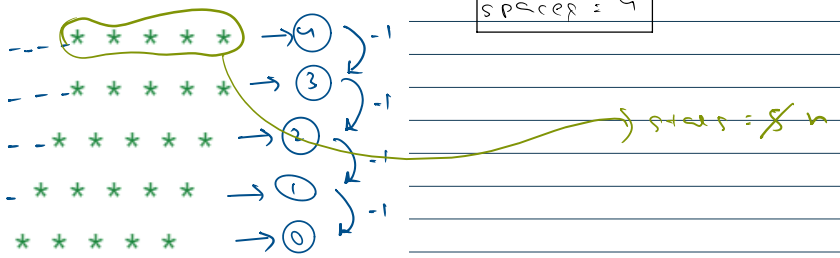
Symmetric Number Pyramid






```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        int stars = 1;
        int row = 1;
        int spaces = n-1;

        while(row <= n){

            int k = 1;
            while(k <= spaces){
                System.out.print("  ");
                k++;
            }

            int j = 1;
            int val = 1;
            while(j <= stars){
                System.out.print(val + " ");
                if(j <= stars/2){
                    val++;
                }
                else{
                    val--;
                }
                j++;
            }
            System.out.println();
            stars = stars + 2;
            row++;
            spaces--;
        }

        sc.close();
    }
}
```

Solid Rhombus




```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        int row = 1;
        int space = n-1;
        int star = n;
        while(row <= n){

            int i = 1;
            while(i <= space){
                System.out.print(" ");
                i++;
            }
            space--;

            int k = 1;
            while(k <= star){
                System.out.print("*");
                k++;
            }
            System.out.println();
            row++;
        }

        sc.close();
    }
}
```