{ for, while, do while,
if else, maths }

Pattern Printing

{ Div 4, Div 3 } – CF
{ Div 4 } – CC

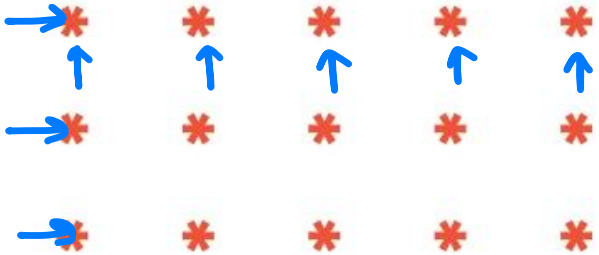
- Viraj Chandra

n = row
m = col

1

Inner loop (j)

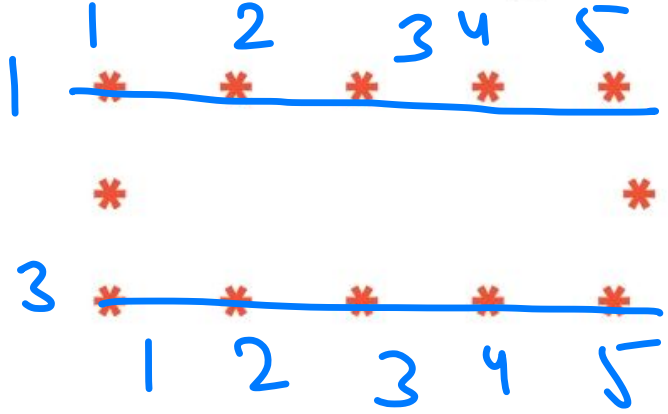
Outer loop (i)



Solid Rectangle

2

Hollow Rectangle



3 (n, m)

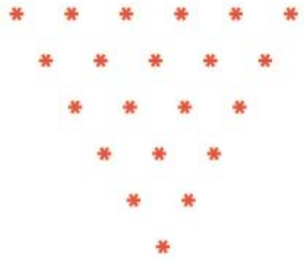
Half Pyramid

Inverted
Half Pyramid

Hollow Inverted
Half Pyramid

4 n = 6

Full Pyramid

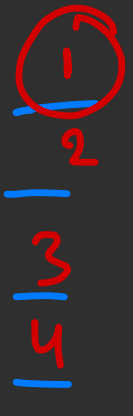


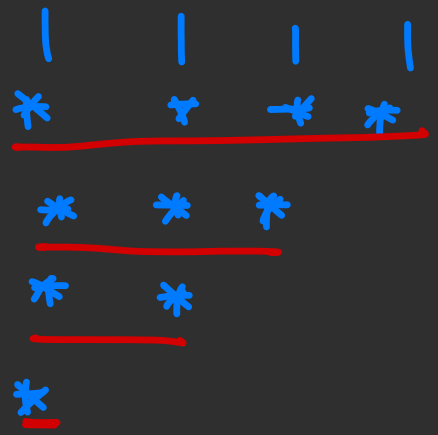
Inverted Full Pyramid

Hollow Full Pyramid

Inverted Triangle

4

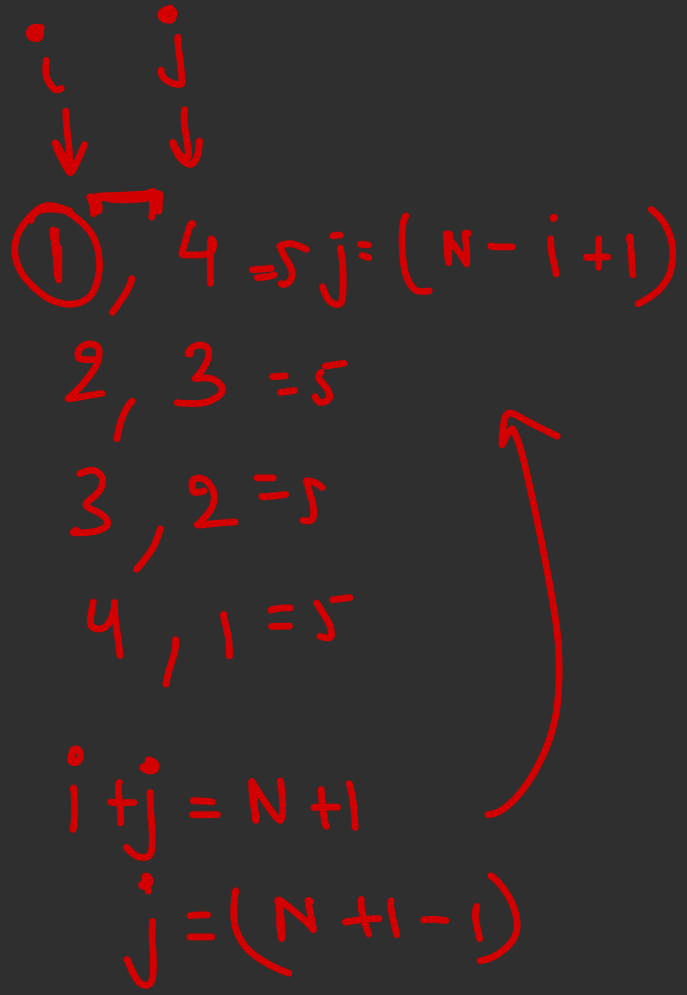




4

i → 1 to 4

j → Smart



j = i

i = 1 → j = 1 to 6

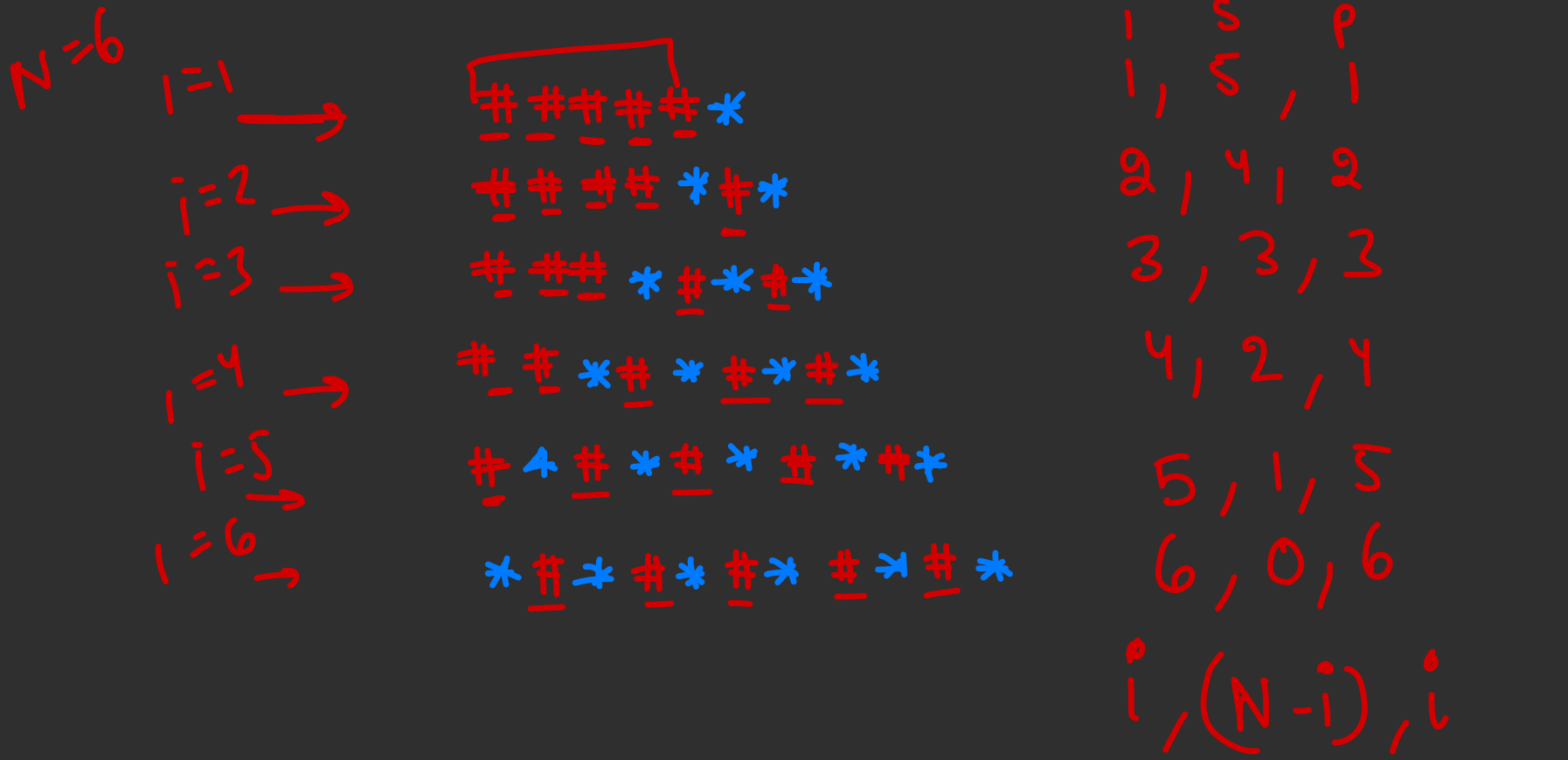
i = 2 → j = 2 to 6 (5)

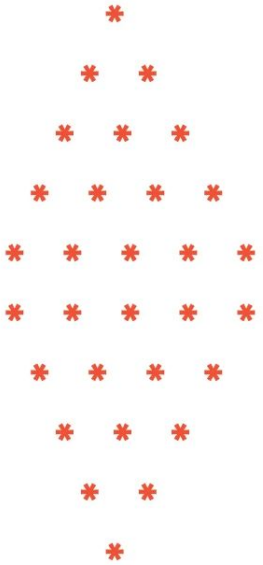
i = 3 → j = 3 to 6 (4)

i = 4

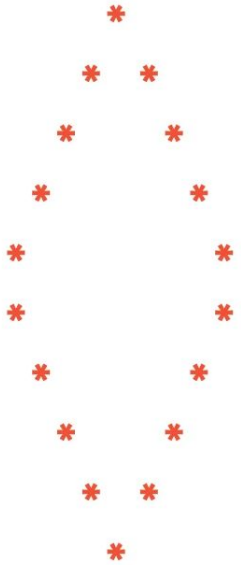
i = 5

i = 6 ——

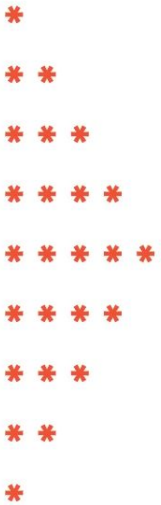




Solid Diamond



Hollow Diamond



Solid Half Diamond

n=5

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

Half Pyramid

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

Inverted
Half Pyramid

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

Hollow
Half Pyramid

```
        1
      2 3 2
    3 4 5 4 3
  4 5 6 7 6 5 4
5 6 7 8 9 8 7 6 5
```

Full Pyramid

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

Hollow Full Pyramid

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

Hollow Inverted
Half Pyramid

i , j

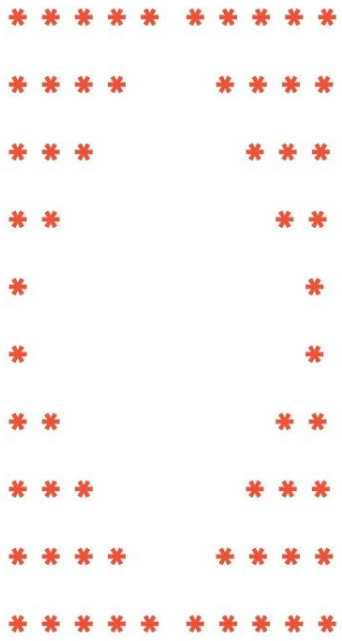
1 , 1

2 , 2

3 , 3

4 , 4

5 , 5



Pascal's Triangle (Important)

(PnC)

1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

1 5 10 10 5 1

1 6 15 20 15 6 1