DAY - 9

Sunfire Sensei

Pattern Print

$n = 4$

Print Space & '*' & Space

$2 \times (n - row)$

row	space		*
1	6	3	1
2	4	2	3
3	2	1	5
4	0	0	7

$2 \times row - 1$

$n - row$

$-r_1$
$-r_2$
$-r_3$
$-r_4$

① row = 1 2 3 4   n = 4

② row ≤ n

③ print space , (n - row) time
                         4 - 4

④ print   * , (2 × row) - 1   time
                    2 × 3 - 1
                       4

⑤ row ++

$$1 \quad X \times \times \times \quad Y \times \times \times$$
$$2 \quad - \times \times \quad Y \times \times \times$$
$$3 \quad - - \times \quad \times \times \times$$
$$4 \quad - - - \times$$

$$2n - 1 \qquad \qquad 101$$
$$2 \times 4 - 1 \qquad \quad 9$$
$$8 - 1$$
$$7$$

row	*	space
1	7	0
2	5	1
3	3	2
4	1	3

$$4 \; 3 \; 2 \; 1$$

$$(row - 1)$$
$$space$$

$$7 - 2x$$

$$\boxed{7} - (2\,row - 1)$$

① row = n   n = 4   row = 4̶ 8̶2̶ (4-3)
                                  0

② row ⩾ L ↗̶

③ print   space , $\dfrac{2n-1 - (2\times row -1)}{2}$ time

④ print   * , (2row-1) time² ↙

   row = row-1 $\underset{\smile}{2\times 4 -1}$
                 2̶4̶ ꜜ-1   n = 4
⑤   = (n-row)
   $\dfrac{2n - 2row}{2}$ 4 - 4   0
                            3
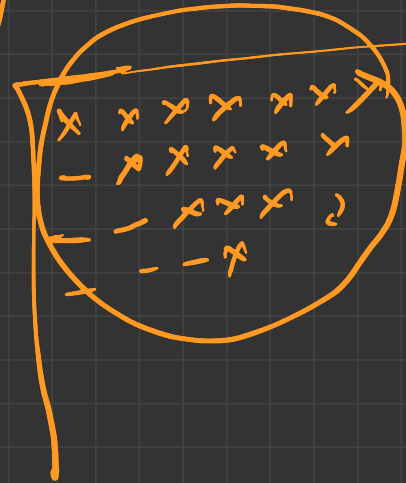
$$\frac{1}{1\ 2\ 1} \to r_1$$
$$\to r_2$$
$$\frac{1}{1\ 2\ 3\ 2\ 1} \to r_3$$
$$1\ 2\ 3\ 4\ 3\ 2\ 1 \to r_4$$

npm

Space , 1 to row ,

row-1 to 1

① row = 1̶ 2̶ 3̶ 4 , n=4

② row ≤ n ✗

③ print space , (n-row) time ✓

④ print 1 to row line ✓

⑤ print (row-1) to 1 dec ✓

⑥ row + 1 ✓✓

n - 1

- - - 1
- - 1 2 1)
- 1 2 3 2 1 2)
1 2 3 4 3 2 1)

$$\begin{array}{x x x x | x x x x} & & & 1 & 4 \\ & & & 2 & 3 \\ & & & 3 & 2 \\ & & & 4 & 1 \end{array}$$

space	*	row
0	4, 4	4
2	3, 3	3
4	2, 2	2
6	1, 1	1

$n = 4$

$n \; \boxed{8} - 2\,row \quad 2n - 2row \quad * = row$

$* = 2\,row$

① row = n   (n = 3)   row = 2 × row

② row ≥ 1 /   ☒

③ print   *, row time ✓

④ print   space   2n - 2row time

⑤ print   *, row time ↻

⑥ row = ..

x x x x x x x
x x _ _ x x
x _ _ _ _ x

① row = 1
② row ≤ n
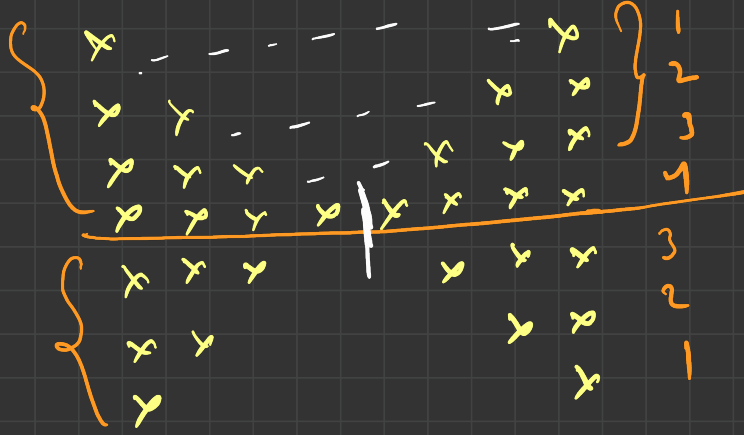③ print *, row time
④ print space 2n - 2row time
⑤ print *, row time
⑥ row ++

n = 3
r = 1 2 3

x - - - - x
x x - - x x
x x x x x x

row	*	space
1	1,1	6
2	2,2	4
3	3,3	2
4	4,4	8

$* = row$

$x = 2row$

$2n - 2row$

upper

```
row = 1 2 3
row ≤ n  *              n = 2
print * row
print space 2n - 2row
print * row

row + f
```

lower

```
row = n - 1          n = 2
                        2 1
row ≥ 1  *  ⊗         0
print * row            4 - 2
print space 2n - 2row
print * row

row - -
```