

Date 28 Sep 2023

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Day 101

Pattern Printing - 4

1.

```

      *
    * * *
  * * * * *
* * * * * *
  
```

$n=4$

space \rightarrow *

$s = (n - \text{row})$

row space * $2 * \text{row} - 1$

1	3	1
2	2	3
3	1	5
4	0	7

2.

```

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

pattern \rightarrow space \rightarrow *

1 to row \rightarrow increasing

row - 1 to 1 \rightarrow decreasing

3.

```

* * * * * * * *
* * * * * *
* * * *
* * *
*
  
```

$n=5$

space \rightarrow *

	star	row	space	(row-1)
9	1	5	0	
$(2 * \text{row} - 1)$	2	4	1	
5	3	3	2	
3	4	2	3	

\Rightarrow

We can also write it as

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* + space + *

Space	now	*
0	4	4, 4
2	3	3, 3
4	2	2, 2
6	1	1, 1

* → space → *		
*	now	space
2,1	1	6
2,2	2	4
3,3	3	2
4,4	4	0

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