

Ques: Print the given pattern

	1	2	3	4	→ j
1	—	—	—	*	
2	—	—	*	*	
3	—	*	*	*	
4	*	*	*	*	

↓
i

n=4

Method - 1

Consider this a square

```
if (i+j > n) cout(*)
else cout("");
```

Star Triangle Vertically Flipped



Method-2: Ek loop ke andar 2 loops
Ques: Print the given pattern

	1	2	3	4
1	—	—	—	*
2	—	—	*	*
3	—	*	*	*
4	*	*	*	*

⇒

1	—	—	—
2	—	—	
3	—		
4	.		

+

1	x			
2	*	*		
3	x	*	*	
4	*	*	*	*

har line me kuch spaces print ho rahi hai & kuch stars print ho rahi hai.
→ har line me 2 loops chal rahi hai

Star Triangle Vertically Flipped



Ques: Print the given pattern

The diagram shows the addition of two 4x4 matrices. The first matrix has values 1, 2, 3, 4 in its first column. The second matrix has values 1, 2, 3, 4 in its first row. The result is a 4x4 matrix with values 2, 3, 4, 5 in its first row and 1, 2, 3, 4 in its first column.

Number Triangle Vertically Flipped

HW: Print the given pattern

```

      A
     BB
    CCC
   DDDD
  
```

Alphabet Triangle Vertically Flipped

Ques: Print the given pattern

```

1      * * * *
  _ _ _
2      * * * *
  _ _
3      * * * *
  _
4      * * * *
  
```

=

```

1      _ _ _
2      _ _
3      _
4      .
  
```

+

```

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

Rhombus

Q Homework

* * * * *

— * * * *

— — * * *

— — — * *

— — — — *

$$n=5$$

Method-1



Ques: Print the given pattern

```
1   _ _ _ *
2   _ _ * * *
3   _ * * * *
4  * * * * *
```

$n = 4$

=

```
1   _ _ _
2   _ _
3   _
4  .
```

+

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

Pyramid

Method-2

Ques: Print the given pattern

```

1      *
  _ _ _
2      * * *
  _ _
3      * * * * *
  _
4      * * * * * * *
  
```

$nsp = n - 1$

$nst = 1$

$nsp -= 1$

$nst += 2$

Pyramid

Ques: Print the given pattern

```

1      *
  _ _ _
2    _ _ * * *
  _ _
3  _ _ * * * * *
  _
4 * * * * * * *
  
```

→ $nsp = n - 1$ | $nsp --$
 $nst = 1$ | $nst += 2$

```

1  _ * * * *
2  _ _ * * *
3  _ _ _ *
  
```

→ $nsp = 1$ | $nsp ++$
 $nst = 2n - 3$ | $nst -= 2$

$n = 4$

Diamond

$n = 1$ $n = 2$

```

*                *
              * * *
            *
  
```

$n = 3$

```

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

Ques: Print the given pattern

```

* * * * *
1 * * * _ * * *
2 * * _ _ _ * *
3 * _ _ _ _ *
4 * _ _ _ _ _ *

```

$n=3$

```

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

```

$n=5$

=

```

1 x x x x
2 x x x
3 x x
4 x

```

+

```

1 _
2 _ _ _
3 _ _ _ _ _
4 _ _ _ _ _ _ _

```

+

```

1 x x x x
2 x x x
3 x x
4 x

```

Bridge

	1	2	3	4	5	6	7
1	1	1	1	1	1	1	1
2	1	2	2	2	2	2	1
3	1	2	3	3	3	2	1
4	1	2	3	4	3	2	1
5	1	2	3	3	3	2	1
6	1	2	2	2	2	2	1
7	1	1	1	1	1	1	1

$n=4 \rightarrow 2n-1$ lines

Number Spiral

$n=1$

1

$n=2$

```

1 1 1
 1 2 1
 1 1 1

```

$n=3$

```

1 1 1 1 1
1 2 2 2 1
1 2 3 2 1
1 2 2 2 1
1 1 1 1 1

```

Concept of fake values.

	1	2	3	4	5	→ j
1	1	1	1	1	1	
2	1	2	2	2	2	
3	1	2	3	3	3	
4	1	2	3	4	4	
5	1	2	3	4	5	
↓ i						

n=5

```

for(i=1 to n)
  for(j=1 to n)
    |   sout(min(i,j));
  }
sout()
}

```



THANKYOU

Curties