Print z, Y, x, W, v,...

Sample Output 0

z Y x W v U t S r Q p O n M l K j I h G f E d C b A

Print `z, Y, x, W, v`... uptil 26 characters using a **while loop**.

a   B   c   D   e   f   G   h   I ---

[0   1   2   3   - - - - - - -   25 ↑]

if (even) →   char   'a' + i

    odd →   char   'A' + i

$[\overset{\downarrow}{25} \quad \overset{\downarrow}{24} \quad \overset{\downarrow}{23} \quad \overset{\downarrow}{22} \text{ ------} \quad \text{---- } \overset{\downarrow}{1} \overset{\downarrow}{0}]$

$\underset{=}{z} \quad \underset{=}{y} \quad \underset{=}{x} \quad \underset{=}{w} \qquad\qquad\qquad \underset{=}{b} \underset{=}{A}$

odd → <u>small</u>

even → <u>capital</u>

$i = \cancel{25} \; \cancel{24} \; \boxed{23}$

'A' + 24

65 + 24 = 89

'a' + i

97 + 23 = 120

$z \; y \; x \; \text{------}$

```java
1  import java.io.*;
2  import java.util.*;
3
4  public class Solution {
5
6      public static void main(String[] args) {
7          int i = 25;
8          while(i >= 0){
9   →          if(i % 2 == 0){
10                 System.out.print((char)('A'+i) + " ");
11  →         }else{
12                 System.out.print((char)('a'+i) + " ");
13             }
14
15             i--;
16         }
17     }
18 }
```

Pattern 1 - Print Stars in same line

Problem	Submissions	Leaderboard	Discussions

Take an integer input **n** and print **n stars in the same** straight line.

$n = 3$

★ ★ ★

$n = 4$

★★★★

$n = 5$

★★ ★★★

$$\{ \quad n \rightarrow i/p$$

$$for (\quad n \ times)$$

$$\{ \quad print ("*");$$

$$\}$$

$1 \times n = (n)$

★★★★

```java
1  import java.io.*;
2  import java.util.*;
3
4  public class Solution {
5
6      public static void main(String[] args) {
7          Scanner scn = new Scanner(System.in);
8          int n = scn.nextInt();
9
10         for(int i = 0; i < n; i++){
11             System.out.print("*");
12         }
13     }
14 }
```

★★★★

$n = 4$.

$i = 0$ $0 < 4$

1     $1 < 4$

2     $2 < 4$

3     $3 < 4$

4     $(4 < 4)$

Pattern 2 - Print n x 12 star rectangle

Take **n** as an integer input and then print a star rectangle such that each line has **n** stars.

Also, there are 12 such lines.

n = 4

0 ★ ★ ★ ★
1   ★ ★ ★ ★
2 ★ ★ ★ ★
3   ★ ★ ★ ★
4   ★ ★ ★ ★
5   ★ ★ ★ ★
6   ★ ★ ★ ★
7   ★ ★ ★ ★
8   ★ ★ ★ ★
9   ★ ★ ★ ★
10 ★ ★ ★ ★
11   ★ ★ ★ ★

n = 3

0 ★ ★ ★
1 ★ ★ ★
2 ★ ★ ★
3 ★ ★ ★
4 ★ ★ ★
5 ★ ★ ★
6 ★ ★ ★
7 ★ ★ ★
8 ★ ★ ★
9 ★ ★ ★
10 ★ ★ ★
11 ★ ★ ★

12 times

```java
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         int n = scn.nextInt();  →n=2
9
10         for(int row = 0; row < 12; row++){
11             for(int i = 0 ; i < n; i++){
12                 System.out.print("*");
13             }
14             System.out.println();
15         }
16
17
18     }
19 }
```

row = 0   0 < 12 ✓

i = 0 ✓   0 < 3 ✓
1 ✓   1 < 3 ✓
2 ✓   2 < 3 ✓
3   (3 < 3) ✗

1   1 < 12 ✓

i = 0   0 < 3

* * *
* * *
* * *

Pattern 3 - nxn star rectangle

Problem	Submissions	Leaderboard	Discussions

Take **n** as an integer input. Then print **nxn** star **rectangle** as mentioned below.

In each line **n stars should be printed**.

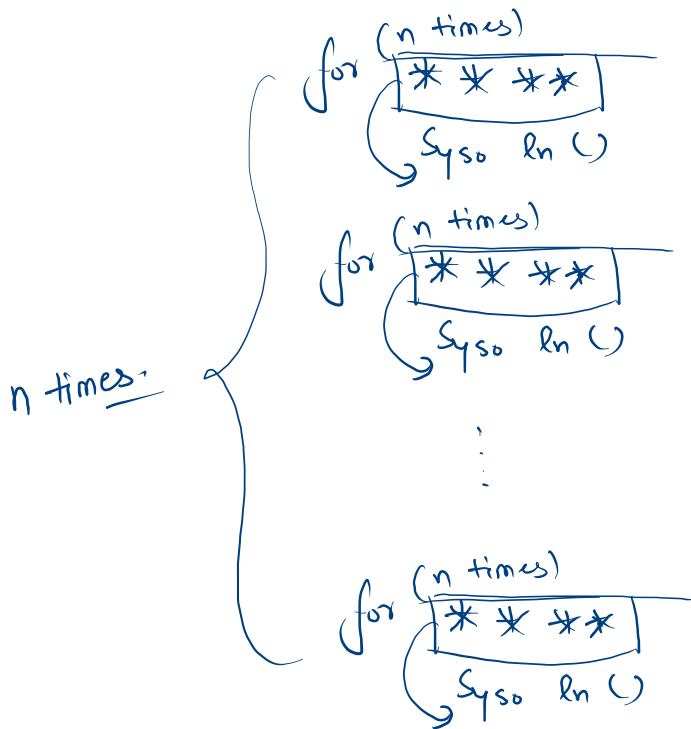And there should be **n such lines**.

for (n times)
```
* * **
```
Syso ln ()

for (n times)
```
* * **
```
Syso ln ()

⋮

for (n times)
```
* * **
```
Syso ln ()

n times

```java
import java.io.*;
import java.util.*;

public class Solution {

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


        for(int row = 0; row < n; row++){
            //single
            for(int i = 0; i < n; i++){
                System.out.print("*");
            }
            System.out.println();
        }

    }
}
```

GKSTR19 Pattern_4

Take Integer **N** as input and print the following pattern.

N = 5

1. mws = ? = N

2.

1 row { → stars = 1 ?
            start +

n = 9

```
*
* *
```

```java
1  import java.io.*;
2  import java.util.*;
3
4  public class Solution {
5
6      public static void main(String[] args) {
7          Scanner scn = new Scanner(System.in);
8          int n = scn.nextInt();
9
10         int star = 1;
11
12         for(int row = 0; row < n; row++){
13             //1 row
14             for(int i = 0; i < star; i++){
15                 System.out.print("* ");
16             }
17             System.out.println();
18             star++;
19         }
20
21
22     }
23 }
```

n = 3

Fundamental.

*
* *
* * *

Star = 1 2 3 4   row = 0   0 < 3
                        1   1 < 3
                        2 3   2 < 3
                                (3 < 3)

i = 0   0 < 3
    1   1 < 3 ✓
    2   2 < 3 ✓
    3   (3 < 3)

*...
......
......*...

output box

*		
*	*	
*	*	*

output box

−	−	*
−	*	*
*	*	*

Pattern - 5.

$n = 5$

1. rows = $\boxed{n}$

2.

Space   Star.

$\left\{ \begin{array}{l} \text{Star} = 1 \\ \text{Space} = n-1 \end{array} \right.$

$\longrightarrow \left\{ \begin{array}{l} \text{Star}{+}{+} \\ \text{Space}{-}{-} \end{array} \right.$
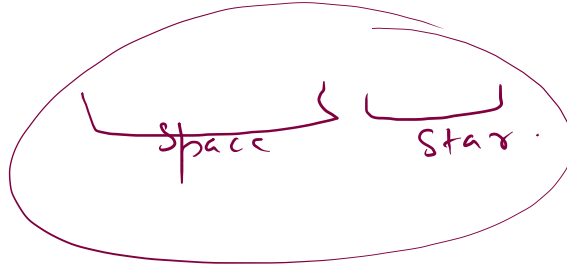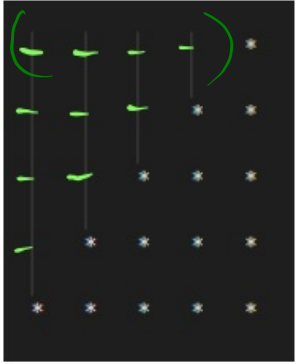
Pattern - 5

p
* *
* * *

n = 3

- - *
- * *
* * *

Star = 1, 2, 3, 4

Space = 2, 1, 0, -1

row = 0, 1, 2, 3

2 < 3

3 < 3

n = 4

- - - *
- - * *
- * * *
* * * *

- - *
- * *
* * *

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();

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

    for(int row = 0; row < n; row++){

        for(int i = 0; i<space; i++){
            System.out.print(" ");
        }
        for(int i = 0; i<star; i++){
            System.out.print("*");
        }

        System.out.println();
        star++;
        space--;
    }

}
```
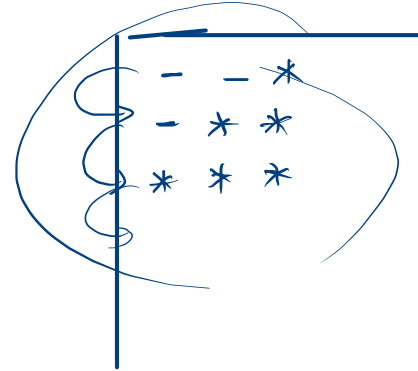
$n=3$

```
3
4  public class Solution {
5
6      public static void main(String[] args) {
7          Scanner scn = new Scanner(System.in);
8          int n = scn.nextInt();
9
10         int star = 1;
11
12         for(int row = 0; row < n; row++){
13             //1 row
14             int val = 1;
15
16             for(int i = 0; i < star; i++){
17                 System.out.print(val +" ");
18                 val++;
19             }
20             System.out.println();
21             star++;
22         }
23
24
25     }
26 }
```

star = 1 2 3 4

nw = 4   0 < 3

5

5   10

5   10   15

5   10

1
1 2
1 2 3

Pattern 6 - Right triangle of 5 multiples

```java
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         int n = scn.nextInt();
9
10         int star = 1;
11
12         for(int row = 0; row < n; row++){
13             //1 row
14             int val = 5;
15
16             for(int i = 0; i < star; i++){
17                 System.out.print(val +" ");
18                 val += 5;
19             }
20             System.out.println();
21             star++;
22         }
23
24
```