Pattern Printing

A. 2-Stars

1 second, 256 megabytes

You are given a positive integer n.

Print a pattern consisting of n rows, where each row contains exactly two stars ('**').

Input
The input contains a single integer n $(1 \le n \le 2 \cdot 10^5)$.

Output
Print n lines. Each line must contain exactly two stars ('**').

input
5
output
** ** ** ** **

input
3
output
** ** **

B. M-Stars

1 second, 256 megabytes

You are given two integers n and m. Your task is to print a rectangle pattern consisting of n rows and m columns, where each cell contains a star '*'.

Input
The only line contains two integers n and m $(1 \le n, m \le 200)$.

Output
Print the pattern.

input
5 6
output
****** ****** ****** ****** ******

input
3 5
output
***** ***** *****

C. Pyramid

1 second, 256 megabytes

You are given a positive integer n.

Print a pyramid pattern consisting of n rows.

Input
The input contains a single integer n $(1 \le n \le 2 \cdot 10^3)$.

Output
Print n lines, as given in the example.

input
5
output
* ** *** **** *****

input
6
output
* ** *** **** ***** ******

input
7
output
* ** *** **** ***** ****** *******

D. Inverse Pyramid

1 second, 256 megabytes

You are given a positive integer n.

Print an inverse pyramid pattern consisting of n rows.

Input
The input contains a single integer n $(1 \le n \le 2 \cdot 10^3)$.

Output
Print n lines, as given in the example

input
3
output
*** ** *

input
5
output
***** **** *** ** *

input
8

output
******** ******* ****** ***** **** *** ** *

E. Square

1 second, 256 megabytes

You are given a positive integer n.

Print an $n \times n$ square of stars.

Input
The input contains a single integer n $(1 \le n \le 2 \cdot 10^3)$.

Output
Print n lines, as given in the example.

input
5
output
***** ***** ***** ***** *****

input
2
output
** **

F. Hollow Square

1 second, 256 megabytes

You are given a positive integer n.

Print a hollow square pattern consisting of n rows.

Input
The input contains a single integer n $(1 \le n \le 2 \cdot 10^3)$.

Output
Print n lines, as given in the example.

input
6
output
****** * * * * * * * * ******

input
2
output
** **

input
8

output
******** * * * * * * * * * * * * ********

G. Hollow Rectangle

1 second, 256 megabytes

Given two integers n and m, print a hollow rectangle of dimensions $n \times m$.

Input
The only line contains two integers n and m ($1 \le n, m \le 100$).

Output
Print the pattern.

input
5 5
output
***** * * * * * * *****

input
6 9

output
********* * * * * * * * * *********

H. Triangle

1 second, 256 megabytes

You are given a positive integer n.

Print a triangle pattern consisting of n rows.

Input
The input contains a single integer n ($1 \le n \le 2 \cdot 10^3$).

Output
Print n lines, as given in the example.

input
5
output
* * * * * * * * * * * * * * *

input
3
output
* * * * * *

I. Hollow Triangle

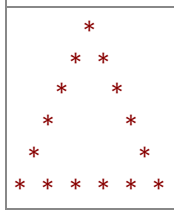
1 second, 256 megabytes

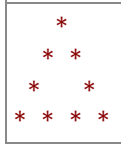
You are given a positive integer n.

Print a hollow triangle pattern consisting of n rows.

Input
The input contains a single integer n $(1 \le n \le 2 \cdot 10^3)$.

Output
Print n lines, as given in the example.

input
6
output


input
4
output


J. Inverted Hollow Triangle

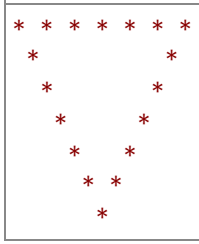
1 second, 256 megabytes

You are given a positive integer n.

Print a inverted hollow triangle pattern consisting of n rows.

Input
The input contains a single integer n $(1 \le n \le 2 \cdot 10^3)$.

Output
Print n lines, as given in the example.

input
7
output


input
3
output


K. Diamond

1 second, 256 megabytes

You are given a positive integer n.

Print a diamond pattern consisting of $2n - 1$ rows. The first n rows form the upper triangle. The next $n - 1$ rows form the lower triangle.

Input
The input contains a single integer n $(1 \le n \le 200)$.

Output
Print the diamond consisting of $2n - 1$ rows.

input
3

output
* * * * * * * *   *

input
3

output
* * * * * * *   *

input
5

output

*
  * *
 * * *
 * * * *
* * * * *
 * * * *
  * * *
  * *
  *

input
5

output

*
  * *
 * *
 * *
* *
 * *
  * *
  * *
  *

L. Hollow Diamond

1 second, 256 megabytes

You are given a positive integer n.

Print a hollow diamond pattern consisting of $2n - 1$ rows. The first n rows form the upper triangle. The next $n - 1$ rows form the lower triangle.

Input
The input contains a single integer n $(1 \leq n \leq 200)$.

Output
Print the hollow diamond consisting of $2n - 1$ rows.

M. Inverted Diamond

1 second, 256 megabytes

You are given a positive integer n.

Print a inverted diamond pattern consisting of $2n - 1$ rows.

Input
The input contains a single integer n $(1 \leq n \leq 200)$.

Output
Print the pattern, as given in the example.

input
5

output

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

input

```
3
```

output

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

N. Crown

1 second, 256 megabytes

You are given a positive integer n.

Print a crown pattern consisting of n rows.

Input
The input contains a single integer n $(1 \le n \le 200)$.

Output
Print the pattern, as given in the example.

input

```
7
```

output

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

input

```
4
```

output

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

O. Butterfly

1 second, 256 megabytes

You are given a positive integer n.

Print a butterfly pattern consisting of $2n - 1$ rows.

Input
The input contains a single integer n $(1 \le n \le 200)$.

Output
Print the pattern, as given in the example.

input

```
6
```

output

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

input

```
4
```

output

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

P. Numbered Traingle

1 second, 256 megabytes

You are given a positive integer n.

Print a pyramid of n rows, where the i-th row ($1 \le i \le n$) consists of the digit i.

Input
The input contains a single integer n ($1 \le n \le 200$).

Output
Print the numbered pyramid with n rows.

input

```
5
```

output

```
1
22
333
4444
55555
```

input

```
6
```

output

```
1
22
333
4444
55555
666666
```

Q. Binary Pyramid

1 second, 256 megabytes

You are given a positive integer n.

Print a pyramid of n rows. The first row contains a single '0'. From the second row onward, the digits alternate between '1' and '0'.

Input
The input contains a single integer n ($1 \le n \le 200$).

Output
Print the binary pyramid with n rows.

input

```
6
```

output
0 10 010 1010 01010 101010

input
2
output
0 10

R. Vertical Traingle

1 second, 256 megabytes

You are given a positive integer n.

Print a triangle of $2n - 1$ rows.

Input
The input contains a single integer n ($1 \le n \le 200$).

Output
Print the vertical triangle of stars, as shown in the example.

input
4
output
* * * * * * * * * * * * * * * *

input
7
output
* *

S. Inverted Vertical Triangle

1 second, 256 megabytes

You are given a positive integer n.

Print a hollow triangle of $2n - 1$ rows.

Input
The input contains a single integer n ($1 \le n \le 200$).

Output
Print the inverted vertical triangle of stars, as shown in the example.

input
5

output

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

input

```
3
```

output

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