

```
In [3]: for i in range(1,6):
        print('*'*i)
```

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```

```
In [4]: for i in range(5,0,-1):
        print('*'*i)
```

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```
In [5]: for i in range(1,6):
        print('*(5-i)+'*(2*i-1))
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```
In [7]: for i in range(5,0,-1):
        print('*(5-i)+'*(2*i-1))
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In [8]: for i in range(1,6):
        print('*(5-i)+'*(2*i-1))
        for i in range(5,0,-1):
            print('*(5-i)+'*(2*i-1))
```

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```
In [11]: for i in range(5):
        for j in range(5):
            if i == 0 or i == 4 or j == 0 or j == 4:
                print('*', end='')
            else:
                print(' ', end='')
        print() #
```

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

```
In [14]: for i in range(5):
          print(' * '*5)
```

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

```
In [15]: for i in range(1,6):
          print(''.join(str(x) for x in range(1,i+1)))
```

```
1
12
123
1234
12345
```

```
In [16]: for i in range(5,0,-1):
          print(''.join(str(x) for x in range(1,i+1)))
```

```
12345
1234
123
12
1
```

```
In [18]: num = 1
          for i in range(1, 6):
              for j in range(1, i + 1):
                  print(num, end=' ')
                  num += 1
              print()
```

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

```
In [20]: for i in range(1, 6):
          for j in range(1, i + 1):
              if j == 1 or j == i or i == 5:
                  print('*', end='')
              else:
                  print(' ', end='')
          print()
```

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

```
In [22]: for i in range(1, 6):
          # Print leading spaces
```

```

for j in range(5 - i):
    print(" ", end="")

# Print stars and spaces
for j in range(2 * i - 1):
    if j == 0 or j == 2 * i - 2 or i == 5:
        print("*", end="")
    else:
        print(" ", end="")

print() # Move to next line

```

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* *
*  *
*   *
*****

```

In [23]:

```

n = 5
for i in range(1, n + 1):
    for j in range(n - i):
        print(" ", end="")
    for j in range(2 * i - 1):
        if j == 0 or j == 2 * i - 2:
            print("*", end="")
        else:
            print(" ", end="")
    print()
for i in range(n - 1, 0, -1):
    for j in range(n - i):
        print(" ", end="")
    for j in range(2 * i - 1):
        if j == 0 or j == 2 * i - 2:
            print("*", end="")
        else:
            print(" ", end="")
    print()

```

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

```

In [24]:

```

n = 5
for i in range(1, n + 1):
    print(" " * (n - i), end="")
    for j in range(1, 2 * i):
        if j == 1 or j == 2 * i - 1:
            print(i, end="")
        else:
            print(" ", end="")
    print()
for i in range(n - 1, 0, -1):
    print(" " * (n - i), end="")

    for j in range(1, 2 * i):

```

```

        if j == 1 or j == 2 * i - 1:
            print(i, end="")
        else:
            print(" ", end="")
    print()

```

```

1
2 2
3 3
4 4
5 5
4 4
3 3
2 2
1

```

```

In [26]: n = 5
for i in range(1, n + 1):
    for j in range(i):
        print('*', end='')
    for j in range(2 * (n - i)):
        print(' ', end='')
    for j in range(i):
        print('*', end='')
    print()
for i in range(n, 0, -1):
    for j in range(i):
        print('*', end='')
    for j in range(2 * (n - i)):
        print(' ', end='')
    for j in range(i):
        print('*', end='')
    print()

```

```

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

```

```

In [27]: n = 5
for i in range(1, n + 1):
    for j in range(1, i + 1):
        print(j, end='')
    for j in range(2 * (n - i)):
        print(' ', end='')
    for j in range(1, i + 1):
        print(j, end='')
    print()
for i in range(n, 0, -1):
    for j in range(1, i + 1):
        print(j, end='')
    for j in range(2 * (n - i)):
        print(' ', end='')
    for j in range(1, i + 1):

```

```

        print(j, end='')
    print()

```

```

1      1
12     12
123    123
1234   1234
12345  12345
12345  12345
1234   1234
123    123
12     12
1      1

```

```

In [28]: n = 5
        for i in range(1, n + 1):
            # Print leading spaces
            print(" " * (n - i), end="")

            # Print numbers with hollow center
            for j in range(1, 2 * i):
                if j == 1 or j == 2 * i - 1 or i == n:
                    print(i, end="")
                else:
                    print(" ", end="")

            print()

```

```

1
2 2
3 3
4 4
555555555

```

```

In [30]: n = 5
        for i in range(1, n + 1):
            print(" " * (n - i), end="")
            print("***" * (2 * i - 1))

```

```

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

```

```

In [32]: n = 5
        for i in range(1, n + 1):
            for j in range(n - i):
                print(' ', end='')
            for j in range(2 * i - 1):
                print('*', end='')

            print()

```

```

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

```

```
In [34]: n = 5

for i in range(n, 0, -1):
    for j in range(n - i):
        print(" ", end="")
    for j in range(2 * i - 1):
        print("*", end="")

    print()
```

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

```
In [35]: n=5
for i in range(1, n+1):
    for j in range(i):
        print('*',end='')
    print()
n=5
for i in range(1, n + 1):
    for j in range(1, i + 1):
        print(j, end='')
    print()
```

```
*
**
***
****
*****
1
12
123
1234
12345
```

```
In [37]: n = 5
for i in range(1, n + 1):
    for j in range(n - i):
        print(' ', end='')
    for j in range(1, i + 1):
        print(j, end='')
    print()
n = 5
for i in range(1, n + 1):
    for j in range(n - i):
        print(" ", end='')
    for j in range(2 * i - 1):
        print("*", end='')
    print()
```

```
1
12
123
1234
12345
*
***
*****
*****
*****
*****
```

In [ ]: