Problems on Loops

1. **Problem Description**

Take T (number of test cases) as input.

For each test case, take integer N as input and Print the count of digits of that number.

Note: **No of digits for number 0 is considered as 1.**

Problem Constraints

`1 <= T <= 10000 <= N <= 100000000`

```
T = int(input())

for _ in range(T):
    N = int(input())
    if N == 0:
        print(1)
    else:
        print(len(str(N)))
```

2. **Problem Description**

Write a program that accepts **T** numbers(**N**) from the user and find reverse of the given number(**N**).

Problem Constraints

1 <= T <= 100

1 <= N <= 100000000

```
T = int(input())

for _ in range(T):
```

```
    N = int(input())
    reverse = 0

    while N > 0:
        digit = N % 10
        reverse = reverse * 10 + digit
        N = N // 10

    print(reverse)
```

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1. Take an integer **N** as input. Print the following pattern of N lines. For **N = 5** The following pattern is printed.

```
*     *

*    *

*   *

*  *

* *

N = int(input())
for i in range(N, 0, -1):
    for j in range(0, i + 2):
        if j == 0 or j == i + 1:
            print("*", end="")
        else:
            print(" ", end="")
    print()
```

2. Take an integer **N** as input, print the corresponding pattern for **N**.

For example if **N = 5** then pattern will be like:

```
*****
_****
__***
___**
____*

N=int(input())
for i in range(1,N+1):
    for j in range(1,N+1):
        if j<i:
            print(" ",end="")
        else:
            print("*",end="")
    print()
```

3. Take an integer **N**, print the corresponding **Full Pyramid** pattern for **N**.

For example if **N = 5** then pattern will be like:

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

N = int(input())

for i in range(N):
    print(" " * (N - i - 1) + "* " * (i + 1))
```

4. Take an integer **N** as input, print the corresponding pattern for **N**.

For example if **N = 5** then pattern will be like:

```
1
1_
1_3
1_3_
1_3_5

def main():
    # YOUR CODE GOES HERE
    # Please take input and print output to standard input/ou
    # E.g. 'input()/raw_input()' for input & 'print' for outp
    n=int(input())
    for r in range(1,n+1):
        for j in range(1,r+1):
            #print('j' ,j,end=" ")
            if j %2!=0:
                print(j,end= "")
            else:
                print(" ",end="")
        print()


    return 0

if __name__ == '__main__':
    main()
```

5. Take an Integer **N** as input. Print an Inverse half pyramid of N lines using `*`.

For example for **N = 5**, the output should be the following pattern:-

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

```
*

N = int(input())

for i in range(N, 0, -1):
    print("*" * i)
```

6. Take an integer **N** as input, print the corresponding pattern for **N**.

For example if **N = 5** then pattern will be like:

```
____*
___**
__***
_****
*****

N = int(input())

for i in range(N, 0, -1):
    print(" " * (i - 1) + "*" * (N - i + 1))
```