1. Write a recursive python function to calculate sum of first N natural numbers

```
x=int(input("enter the range"))
def sum(n):
    if n==1:
        return 1
    return n+sum(n-1)
print(sum(x))
```

2. Write a recursive python function to calculate sum of first N odd natural numbers

```
x=int(input("enter the range"))
def sum(n):
    if n==1:
        return 1
    return (2*n-1)+sum(n-1)
print(sum(x))
```

3. Write a recursive python function to calculate sum of first N even natural numbers

```
x=int(input("enter the range"))
def sum(n):
    if n==1:
        return 2
    return (2*n)+sum(n-1)
print(sum(x))
```

4. Write a recursive python function to calculate sum of squares of first N natural numbers

```
x=int(input("enter the range"))
def sum(n):
    if n==1:
        return 1
    return (n**2)+sum(n-1)
print(sum(x))
```

5. Write a recursive python function to calculate sum of cubes of first N natural numbers

```
x=int(input("enter the range"))
def sum(n):
    if n==1:
        return 1
    return (n**3)+sum(n-1)
print(sum(x))
```

6. Write a recursive python function to calculate the factorial of a number.

```
x=int(input("enter a number"))
def fact(n):
    if n==0:
        return 1
    return n*fact(n-1)
print(fact(x))
```

7. Write a recursive python function to calculate sum of the digits of a given number

```
x=int(input("enter the number"))
def digit_sum(n):
    if n>0:
        return n%10+digit_sum(n//10)
    else:
        return n

print(digit_sum(x))
```

8. Write a recursive python function to print binary of a given decimal number.

```
def dec_bin(n):
    if n==0:
        return 0
    return ((n%2)+10*dec_bin(n//2))
y=int(input("enter the number"))
print(dec_bin(y))
```

9. Write a recursive python function to print octal of a given decimal number

```
def dec_oct(n):
    if n==0:
        return 0
    return ((n%8)+10*dec_oct(n//8))
y=int(input("enter the number"))
print(dec_oct(y))
```

10. Write a recursive python function to find the Nth term of the Fibonacci series.

```
a=int(input("enter the range"))
def nth_term(n):
    if n==1:
        return 0
    elif n==2:
        return 1
    else:
        while n>0:
            return nth_term(n-1)+nth_term(n-2)
print(nth_term(a))
```