1. Write a Python Program to Display Fibonacci Sequence Using Recursion?

```
# Python program to display the Fibonacci sequence

def recur_fibo(n):
  if n <= 1:
    return n
  else:
    return(recur_fibo(n-1) + recur_fibo(n-2))

nterms = 10

# check if the number of terms is valid
if nterms <= 0:
  print("Plese enter a positive integer")
else:
  print("Fibonacci sequence:")
  for i in range(nterms):
    print(recur_fibo(i))
```

2. Write a Python Program to Find Factorial of Number Using Recursion?

```
# Factorial of a number using recursion

def recur_factorial(n):
  if n == 1:
    return n
  else:
    return n*recur_factorial(n-1)

num = 7

# check if the number is negative
if num < 0:
  print("Sorry, factorial does not exist for negative numbers")
elif num == 0:
  print("The factorial of 0 is 1")
else:
  print("The factorial of", num, "is", recur_factorial(num))
```

3. Write a Python Program to calculate your Body Mass Index?

```
height = float(input("Input your height in Feet: "))
weight = float(input("Input your weight in Kilogram: "))
print("Your body mass index is: ", round(weight / (height * height), 2))
```

4. Write a Python Program to calculate the natural logarithm of any number?

```
import math

# Printing the log base e of 14
print ("Natural logarithm of 14 is : ", end="")
```

```
print (math.log(14))

# Printing the log base 5 of 14
print ("Logarithm base 5 of 14 is : ", end="")
print (math.log(14,5))
```

5. Write a Python Program for cube sum of first n natural numbers?

Input : n = 5
Output : 225
$\mathbf{1^3 + 2^3 + 3^3 + 4^3 + 5^3 = 225}$

Input : n = 7
Output : 784
$\mathbf{1^3 + 2^3 + 3^3 + 4^3 + 5^3 +}$
$\mathbf{6^3 + 7^3 = 784}$