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

**Ans:- def fibonacci(n):**

**if n <= 1:**

**return n**

**else:**

**return fibonacci(n-1) + fibonacci(n-2)**

**def display\_fibonacci\_sequence(count):**

**if count <= 0:**

**print("Please enter a positive integer.")**

**else:**

**print("Fibonacci sequence:")**

**for i in range(count):**

**print(fibonacci(i))**

**# Example usage**

**display\_fibonacci\_sequence(10)**

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

**Ans:- def factorial(n):**

**if n == 0:**

**return 1**

**else:**

**return n \* factorial(n-1)**

**# Example usage**

**number = int(input("Enter a number: "))**

**if number < 0:**

**print("Factorial is not defined for negative numbers.")**

**else:**

**result = factorial(number)**

**print("Factorial of", number, "is", result)**

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

**Ans:- weight = float(input("enter your weight: "))**

**height = float(input("enter your height in meters: "))**

**print(weight/height\*\*2)**

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

**Ans:- import math**

**number = float(input("Enter a positive number: "))**

**if number <= 0:**

**print("Natural logarithm is not defined for non-positive numbers.")**

**else:**

**result = math.log(number)**

**print(f"The natural logarithm of {number} is {result}.")**

1. Writea Python Program for cube sum of first n natural numbers?

**Ans:- sum = 0**

**a = int(input("enter a number: "))**

**for i in range(1, a+1):**

**sum += i\*\*3**

**print(sum)**