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

def fiboseq(num):

seq = [0,1]

if num <=0:

return 0

elif num ==1:

return seq

elif num>seq[-1]:

seq.append(seq[-1]+seq[-2])

def fiboseq(num)

else:

print(‘someting not right’)

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

def factorial(n):

if n == 0 or n == 1:

return 1

else:

return n \* factorial(n - 1)

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

if num < 0:

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

else:

print(f"The factorial of {num} is: {factorial(num)}")

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

def calculate\_bmi(weight, height):

return weight / (height \* height)

weight = float(input("Enter your weight in kilograms: "))

height = float(input("Enter your height in meters: "))

bmi = calculate\_bmi(weight, height)

print(f"Your Body Mass Index (BMI) is: {bmi:.2f}")

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

import math

num = float(input("Enter a number: "))

if num <= 0:

print("Natural logarithm is only defined for positive numbers.")

else:

natural\_log = math.log(num)

print(f"The natural logarithm of {num} is: {natural\_log:.4f}")

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

def cube\_sum(n):

return sum(i\*\*3 for i in range(1, n+1))

num = int(input("Enter a number (n): "))

if num < 0:

print("Please enter a positive number.")

else:

result = cube\_sum(num)

print(f"The cube sum of first {num} natural numbers is: {result}")