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

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))

1. Write a Python Program to Find Factorial of 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))

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

#Simple BMI calculator using python

def bodymassindex(height, weight):

return round((weight / height\*\*2),2)

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

w = float(input("Enter your weight in kg: "))

print("Welcome to the BMI calculator.")

bmi = bodymassindex(h, w)

print("Your BMI is: ", bmi)

if bmi <= 18.5:

print("You are underweight.")

elif 18.5 < bmi <= 24.9:

print("Your weight is normal.")

elif 25 < bmi <= 29.29:

print("You are overweight.")

else:

print("You are obese.")

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

# log(a,Base)

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))

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

n=5

s=0

# iterating loop up to given number n

for i in range(1,n+1):

# adding cube sum using pow() function

s=s+pow(i,3)

print(s)