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

A. # take input for the number

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

# initialize the factorial variable to 1

factorial = 1

# calculate the factorial using a for loop

if num < 0:

print("Factorial does not exist for negative numbers.")

elif num == 0:

print("Factorial of 0 is 1.")

else:

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

factorial \*= i

print("Factorial of", num, "is", factorial)

1. Write a Python Program to Display the multiplication Table?

A. # take input for the number

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

# loop through 1-10 and print the multiplication table

for i in range(1, 11):

print(num, "x", i, "=", num\*i)

1. Write a Python Program to Print the Fibonacci sequence?

A. # take input for the number of terms

n = int(input("Enter the number of terms: "))

# initialize variables

a = 0

b = 1

# print first two terms

print("Fibonacci sequence:")

print(a)

print(b)

# loop through remaining terms and print them

for i in range(2, n):

c = a + b

print(c)

a = b

b = c

1. Write a Python Program to Check Armstrong Number?

A.

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

# initialize variables

sum = 0

temp = num

n = len(str(num))

# loop through each digit, cube it, and add to sum

while temp > 0:

digit = temp % 10

sum += digit \*\* n

temp //= 10

# check if the number is Armstrong number or not

if num == sum:

print(num, "is an Armstrong number")

else:

print(num, "is not an Armstrong number")

1. Write a Python Program to Find Armstrong Number in an Interval?

A. # take input for the interval

lower = int(input("Enter the lower limit: "))

upper = int(input("Enter the upper limit: "))

print("Armstrong numbers in the given interval are:")

for num in range(lower, upper + 1):

# initialize variables

sum = 0

temp = num

n = len(str(num))

# loop through each digit, cube it, and add to sum

while temp > 0:

digit = temp % 10

sum += digit \*\* n

temp //= 10

# check if the number is Armstrong number or not

if num == sum:

print(num)

1. Write a Python Program to Find the Sum of Natural Numbers?

A. # take input for the limit

limit = int(input("Enter the limit: "))

# initialize variables

sum = 0

num = 1

# loop through each number and add it to sum

while num <= limit:

sum += num

num += 1

# print the sum of natural numbers

print("The sum of natural numbers up to", limit, "is:", sum)