***3(a) sum of series 1+2+3+……..+n***

***Program:***

sum=0

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

sum=(n\*(n+1))/2

print("The sum of n number series:",sum)

***ouput:***

Enter the no of term:62

The sum of n number series: 1953.0

***3(b)sum of series 1+3+5+7+……..+n***

***Program:***

sum=0

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

for i in range(0,n+1):

if i%2 !=0:

sum=sum+i

print("The sum of n odd number series:",sum)

***output:***

Enter the number of terms:45

The sum of n odd number series: 529

***3(c)sum of series1^2+2^2+3^2+4^2+……..+n^2***

***Program:***

sum=0

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

sum=(n\*(n+1)\*(2\*n+1))/6

print("the sum of square of",n," number:",sum)

***output:***

Enter the number of terms:5

the sum of square of n number: 55.0

***3(d)sum of series 1^1+2^2+3^3+…..+n^n***

***Program:***

sum=0

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

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

sum=sum+(i\*\*i)

print("the sum of given series:",sum)

***output:***

Enter the number of terms:8

the sum of given series: 17650828

***3(e)sum of series1/1!+2/2!+3/3!.....+n/n!.***

***Program:***

sum=0

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

fact=1

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

fact\*=i

sum=sum+i/fact

print("The sum of given series:",sum)

***ouput:***

Enter the number of terms:15

The sum of given series: 2.71828182845823

***3(f)sum of series1/1!-2/2!+3/3!-4/4!+.....+n/n!.***

***Program:***

sum=0

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

fact=1

sign=-1

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

fact=fact\*i

sign=-1\*sign

sum=sum+(i\*sign)/fact

print("The sum of the given series is:",sum)

***ouput:***

Enter the n number of terms:6

The sum of the given series is: 0.3666666666666667