

-: Program :-

WAP to print the series and its sum: (use functions)

$$1/1! + 1/2! + 1/3! + \dots + 1/n!$$

-: Code :-

```
def factorial(num):
```

```
    fact = 1
```

```
    while num:
```

```
        fact *= num
```

```
        num -= 1
```

```
    return fact
```

```
def fact_series(num):
```

```
    sum_str = ""
```

```
    sum = 0
```

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

```
        sum += round(1/factorial(i),2)
```

```
        if i < num:
```

```
            sum_str += "1/"+str(factorial(i)) + " + "
```

```
        else:
```

```
            sum_str += "1/"+str(factorial(i)) + " = "
```

```
    return sum_str,sum
```

```
num = int(input("Enter the Number: "))
```

```
fact = fact_series(num)
```

```
print(fact[0],fact[1],sep="")
```

-: Output :-

```
● Enter the Number: 5
  1/1 + 1/2 + 1/6 + 1/24 + 1/120 = 1.72
○ PS C:\Users\Anshumank Sahay\Desktop\Class wo
```