Started on	Tuesday, 29 October 2024, 3:08 PM
State	Finished
Completed on	Tuesday, 29 October 2024, 3:40 PM
Time taken	32 mins 29 secs
Grade	**80.00** out of 100.00

Question **1**

Not answered

Mark 0.00 out of 20.00

Write a Python code to evaluate the following expression for k= 10 terms using recursion

$$\frac{1}{1-x} = \sum_{k=0}^{\infty} x^k, \text{ for } -1 < x < 1$$

For example:

Input	Result
0.8	4.5705032704000015

Answer: (penalty regime: 0 %)

```
1 
```

Question **2**

Correct

Mark 20.00 out of 20.00

Write a Python program to find the result of a! + b! using recursion

For example:

Input	Result
3 2	8

Answer: (penalty regime: 0 %)

```python
1  def fact(n):
2      if n==0:
3          return 1
4      else:
5          return n*fact(n-1)
6
7  a=int(input())
8  b=int(input())
9  sum=fact(a)+fact(b)
10 print(sum)
```

	Input	Expected	Got	
✔	3 2	8	8	✔
✔	5 7	5160	5160	✔
✔	11 6	39917520	39917520	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **3**

Correct

Mark 20.00 out of 20.00

Write a program to determine the sum of all elements in the list using recursion

For example:

Test	Input	Result
print(sum_list(l,len(l)-1))	3 111 222 333	666

Answer: (penalty regime: 0 %)

[Reset answer]

```
 1  def sum_list(l,length):
 2      if length<0:
 3          return 0
 4      else:
 5          return l[length]+sum_list(l,length-1)
 6
 7
 8
 9  l=[]
10  n=int(input())
11  for i in range(n):
12      x=int(input())
13      l.append(x)
```

	Test	Input	Expected	Got	
✔	print(sum_list(l,len(l)-1))	5 11 22 33 44 55	165	165	✔
✔	print(sum_list(l,len(l)-1))	3 111 222 333	666	666	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **4**

Correct

Mark 20.00 out of 20.00

Write a lambda function which takes z as a parameter and returns z*11 using python

For example:

Input	Result
18	198

Answer: (penalty regime: 0 %)

```
1  z=int(input())
2  c=z*11
3  print(c)
```

	Input	Expected	Got	
✔	18	198	198	✔
✔	6	66	66	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **5**

Correct

Mark 20.00 out of 20.00

Write a program program to display first n natural numbers in reverse order using tail recursion.

For example:

Input	Result
10	10 9 8 7 6 5 4 3 2 1

Answer: (penalty regime: 0 %)

```
1  def sum(n):
2      if n>0:
3          print(n,end=" ")
4          sum(n-1)
5  n=int(input())
6  sum(n)
```

	Input	Expected	Got	
✔	20	20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	✔
✔	10	10 9 8 7 6 5 4 3 2 1	10 9 8 7 6 5 4 3 2 1	✔
✔	15	15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.