Started on	Friday, 6 September 2024, 2:04 PM
State	Finished
Completed on	Friday, 6 September 2024, 2:29 PM
Time taken	24 mins 19 secs
Grade	**80.00** out of 100.00

Question **1**

Incorrect

Mark 0.00 out of 20.00

Write a Python program to find the product of all elements in the list

For example:

Test	Input	Result
`print(prod_list(l,len(l)-1))`	4 12 13 10 4	6240

Answer: (penalty regime: 0 %)

Reset answer

```
def prod_list(l,length):
    for i in range(0,n+1):
        s=i*length
        return s


l=[]
n=int(input())
for i in range(n):
    x=int(input())
    l.append(x)
```

	Test	Input	Expected	Got	
✖	`print(prod_list(l,len(l)-1))`	4 12 13 10 4	6240	0	✖
✖	`print(prod_list(l,len(l)-1))`	6 1 2 3 4 5 6	720	0	✖

Some hidden test cases failed, too.

Your code must pass all tests to earn any marks. Try again.

Show differences

Incorrect

Marks for this submission: 0.00/20.00.

Question **2**

Correct

Mark 20.00 out of 20.00

1. **A. Write a Python Program to convert a decimal number to a binary number using tail recursion.**

For example:

Input	Result
12	1100

Answer: (penalty regime: 0 %)

```
def rec(n):
    if n==0:
        return ""
    else:
        return  rec(n//2) + str(n%2)

n=int(input())
res=rec(n)
print(res)
```

	Input	Expected	Got	
✔	20	10100	10100	✔
✔	12	1100	1100	✔
✔	36	100100	100100	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **3**

Correct

Mark 20.00 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 %)

```
def rec(x,n):
    if n==0:
        return 1
    else:
        return (x**n)+rec(x,n-1)

n=10
x=float(input())
print(rec(x,n))
```

	Input	Expected	Got	
✔	0.8	4.5705032704000015	4.5705032704000015	✔
✔	-0.5	0.6669921875	0.6669921875	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **4**

Correct

Mark 20.00 out of 20.00

Write a python program to define a function that accepts 2 values and return its sum, subtraction and multiplication.

Answer: (penalty regime: 0 %)

```
def add (a,b):
    return a+b

def sub (a,b):
    return a-b

def mul (a,b):
    return a*b

a=int(input())
b=int(input())
print(f"Sum is {add(a,b)}, Sub is {sub(a,b)}, & Multiply is {mul(a,b)}")
```

	Input	Expected	Got	
✔	10 20	Sum is 30, Sub is -10, & Multiply is 200	Sum is 30, Sub is -10, & Multiply is 200	✔
✔	85 63	Sum is 148, Sub is 22, & Multiply is 5355	Sum is 148, Sub is 22, & Multiply is 5355	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **5**

Correct

Mark 20.00 out of 20.00

Write a Python Program to evaluate the series:

1!+2!+3!+....n! using recursion

For example:

Input	Result
4	33

Answer: (penalty regime: 0 %)

```
def fact(n):
    if n==0 or n==1:
        return 1
    else:
        return n*fact(n-1)

def sum(n,t=1):
    if n==0:
        return 0
    else:
        return fact(t)+sum(n-1,t+1)

n=int(input())
res=sum(n)
print(res)
```

	Input	Expected	Got	
✔	4	33	33	✔
✔	6	873	873	✔
✔	9	409113	409113	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.