

PYTHON MODULE 2

1. Python Program to find the sum of series $1^2+2^2+3^2+\dots+N^2$.

For example:

Input	Result
2	The sum of the series = 5

PROGRAM:

```
a=int(input())
i=0
c=0
sum = 0
for i in range (1,a+1):
    c=i**2
    sum=sum+c
    i=i+1
print("The sum of the series = ",sum)
```

RESULT:

	Input	Expected	Got	
✓	2	The sum of the series = 5	The sum of the series = 5	✓
✓	5	The sum of the series = 55	The sum of the series = 55	✓
✓	4	The sum of the series = 30	The sum of the series = 30	✓

Passed all tests! ✓

2. Python Program to check if a number is a Perfect number using the concept of [functions](#).

For example:

Input	Result
6	The number is a Perfect number!

PROGRAM:

```
a=int(input())
```

```
sum=0
```

```
for i in range (1,a):
```

```
    if(a%i==0):
```

```
        sum=sum+i
```

```
if sum==a:
```

```
    print("The number is a Perfect number!")
```

```
else:
```

```
    print("The number is not a Perfect number!")
```

RESULT:

	Input	Expected	Got	
✓	6	The number is a Perfect number!	The number is a Perfect number!	✓
✓	30	The number is not a Perfect number!	The number is not a Perfect number!	✓
✓	28	The number is a Perfect number!	The number is a Perfect number!	✓

Passed all tests! ✓

3. Write a function which takes three arguments: a and b and c and returns the multiplication of them: $a*b*c$. Assign it to a variable named: f. using python

For example:

Input	Result
10 20 30	6000

PROGRAM:

```
a=int(input())
```

```
b=int(input())
```

```
c=int(input())
```

```
f=lambda a,b,c:a*b*c
```

```
print(f(a,b,c))
```

RESULT:

	Input	Expected	Got	
✓	10 20 30	6000	6000	✓
✓	2 3 5	30	30	✓

Passed all tests! ✓

4. Python program to print alternate number pattern .Get the number of rows as input

For example:

Input	Result
5	1 3 3 5 5 5 7 7 7 7 9 9 9 9 9

PROGRAM:

```
a=int(input())  
for i in range(1,a+1):  
    b=2*i-1  
    for j in range(1,i+1):  
        print(b,end=" ")  
    print()
```

RESULT:

	Input	Expected	Got	
✓	5	1 3 3 5 5 5 7 7 7 7 9 9 9 9 9	1 3 3 5 5 5 7 7 7 7 9 9 9 9 9	✓
✓	6	1 3 3 5 5 5 7 7 7 7 9 9 9 9 9 11 11 11 11 11 11	1 3 3 5 5 5 7 7 7 7 9 9 9 9 9 11 11 11 11 11 11	✓
✓	4	1 3 3 5 5 5 7 7 7 7	1 3 3 5 5 5 7 7 7 7	✓
Passed all tests! ✓				

5. Write Python program to print reverse Pyramid of numbers. Get the number of rows as input.

For example:

Input	Result
6	1 2 1 3 2 1 4 3 2 1 5 4 3 2 1

PROGRAM:

```
a=int(input())
```

```
for i in range(1,a):
```

```
    for j in range(i,0,-1):
```

```
        print(j,end=" ")
```

```
    print()
```

RESULT:

	Input	Expected	Got	
✓	6	1 2 1 3 2 1 4 3 2 1 5 4 3 2 1	1 2 1 3 2 1 4 3 2 1 5 4 3 2 1	✓
✓	4	1 2 1 3 2 1	1 2 1 3 2 1	✓
✓	5	1 2 1 3 2 1 4 3 2 1	1 2 1 3 2 1 4 3 2 1	✓

Passed all tests! ✓

