Assignment Questions Python Programming

Question 1: Finding sum of first n natural numbers using lambda function:

```
#sum of first n natural numbers using lambda function
a=int(input("enter the natural number upto which the sum has to be done:"))
x=lambda n: sum(range(1,n+1))
print(x(a))
```

```
enter the natural number upto ehich the sum has to be done:15
120
```

Question 2: Using the variable argument property enter a list of numbers and output only the prime no.

```
import math
def primeno(*x):
    for n in range(len(x)):
        flag=0
        if x[n]==2:
             print(x[n], " is a prime no")
        elif x[n]==0 or x[n]==1:
            pass
        else:
            c=math.ceil(x[n]**1/2)
            for i in range(2,c+1):
                if x[n]%i==0:
                    flag=1
                    break
            if flag==0:
                print(x[n], " is a prime no")
print("enter numbers and enter * to stop entering")
flag=0
mylist=[]
while(flag<1):
    b=input("enter a number:")
    if b=='*':
        break
    else:
        mylist.append(int(b))
print(mylist)
primeno(*mylist)
```

```
enter numbers and enter * to stop entering
enter a number:2
enter a number:5
enter a number:6
enter a number:7
enter a number:9
enter a number:11
enter a number:*
[2, 5, 6, 7, 9, 11]
2  is a prime no
5  is a prime no
7  is a prime no
11  is a prime no
```

Question 3: Using recursive function find the sum of the series of first n fibonacci numbers:

```
#Sum of a given length of fibonacci series
def fibonacci(n):
    if n<=1:
        return n
    return fibonacci(n-1)+fibonacci(n-2)
def fibonaccisum(n):
    sum=0
    for i in range(n):
        sum=sum+fibonacci(i)
        if i==n-1:
            print(fibonacci(i), " is:")
        else:
            print(fibonacci(i),end=" ")
    return sum
a=int(input("enter the length of the fibonacci series:"))
print("The sum of the fibonacci series")
print(fibonaccisum(a))
```

```
enter the length of the fibonacci series:10
The sum of the fibonacci series
0 1 1 2 3 5 8 13 21 34  is:
88
```