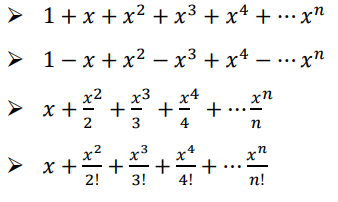
1. Write a Program to check if an input number is a perfect number, an Armstrong number or a palindrome.
2. Write a Program to display first 15 terms of Fibonacci Series.
3. Write a Program to Input a sentence and count and display the number of vowels, consonants, uppercase characters, lowercase characters in input sentence.
4. Write a program to input the value of x and n and print the sum of the following series:



1. Write a program to print the following pattern:

|  |  |
| --- | --- |
| (a) | (b) |

1. Write a Program to check the Input string is palindrome or not.
2. Write a program that reads a string and then prints a string that capitalizes every other letter in the string. E.g. passion becomes pAsSiOn.
3. Input a string having some digits. Write a program to calculate the sum of digits present in this string.
4. Write a menu driven program that displays options for inserting or deleting elements in a list. Eg. If the user chooses a deletion option, display a submenu and ask if element is to be deleted with value or by using its position or a list slice is to be deleted.
5. Write a program to implement a simple calculator for two input numbers. offer choices through a menu.
6. Write a program that asks the user for a string and creates a new string that doubles each character of the original string. For instance, if user enters python, the output should be ppyytthhoonn.
7. Create a list of numbers. Also, input a number to be searched from the list. Calculate the mean of list of numbers.
8. Write a program to input a list and an element, and remove all occurrences of the given element from the list.
9. Write a program to compare two equal sized lists and print the first index where they differ.
10. Write a program to read email IDs of n number of students and store them in a tuple. Create two new tuples, one to store only the usernames from the email IDs and second to store domain names from the email ids. Print all three tuples at the end of the program.
11. Write a program that interactively creates a nested tuple to store the marks in three subjects for five students and also add a function that computes total marks and average marks obtained by each student.  
    Tuple will look somewhat like :  
    marks( (45, 45, 40), (35, 40, 38),(36, 30, 38), (25, 27, 20), (10, 15, 20) ).
12. Write a program to read a sentence having alphabets as well as digits in it and then create a dictionary that contains the frequency of letters and digits in the sentence. Ignore other symbols, if any.
13. . Write a program to input your friends’ names and their Phone Numbers and store them in the dictionary as the key-value pair.  Perform the following operations on the dictionary:

a) Display the name and phone number of all your friends

b) Add a new key-value pair in this dictionary and display the modified dictionary

c) Delete a particular friend from the dictionary

d) Modify the phone number of an existing friend

e) Check if a friend is present in the dictionary or not

f) Display the dictionary in sorted order of names

1. Write a program that sort a list of tuple – elements in descending order of points using bubble sort. The tuple – element of the list contain following information about different players: (player number , player name , points )
2. Python program to Sort a List of Tuples in Increasing Order by the Last Element in Each Tuple using Insertion sort.

**e.g Input:** [(1, 3), (3, 2), (2, 1)]

**Output:** [(2, 1), (3, 2), (1, 3)