

1. Write a python program to compute the following functions:
 $A = X^2 + Y^2$
 $B = A^2 + XY$
 $C = (A+B)^2$
2. Write a python program to compute the **area** and **circumference** of triangle it sides $x=4$, $y=3$, $z=5$.
3. Write a python program to find horizontal component and vertical component and for force =70N slope 45° From x-axis.
4. Write a python program to compute the real roots of a equation $AX^2 + BX + C = 0$. Your program should prompt user for values of A, B, C and use it compute X_1 and X_2
5. Write a python program to compute the **area** and **circumference** of circle. Your program should prompt user for the value of R.
6. Write a python program to read **name** and **age** of 6 student and compute the average of their age.
7. Write a python program to read 4 variables A, B, C and D then compute **arithmetic mean** and **geometric mean**.
8. Write a python program to compute the Summation (S) of values from 1 to 100 where: $S = 1+2+3+\dots+100$.
9. Write a python program to compute the Summation (S) of values from 1 to 100 where: $S = 1^2+2^2+3^2+\dots+99^2+100^2$.
10. Write a python program to compute the Summation (S) of values from 1 to 100 where: $S = 1^3+2^3+3^3+\dots+99^3+100^3$.
11. Write a python program to compute the Summation (S) of values from 1 to 100 where: $S = 1^3 \times 2^3 \times 3^3 \times \dots \times 99^3 \times 100^3$.
12. Write a python program to compute the Summation (S) of values from 1 to 100 where: $S = 1^3 \times 2^3 \times 3^3 \times \dots \times 99^3 \times 100^3$.
13. Write a python program to compute the number of even numbers between 3 and 35
14. Write a python program to compute the number of even numbers between 3 and n
15. Write a python program to compute the number of odd numbers between 3 and 35
16. Write a python program to compute the number of odd numbers between 3 and n
17. Write a python program to compute the number of Prime numbers between 3 and 38
18. Write a python program to compute the number of Prime numbers between 3 and n
19. Write a program to compute S value where : $S = 1 + 1/3 + 1/5 + 1/7 + 1/9 + 1/11 + \dots + 1/n$.
20. Write a program to compute S value where : $S = 1 + 1/2 + 1/3 + 1/4 + 1/5 + 1/6 + \dots + 1/n$.
21. Write a program to compute S value where : $S = 1 + 1/2 + 1/4 + 1/6 + 1/8 + 1/10 + \dots + 1/n$.
22. Write a python program accept input of any number then determine if the number is integer or not.

23. Write a python program accept input of any number then determine if the number is prime or not.
24. Write a python program accept input of any number then determine if the number is a float data type or not.

25. Write a program to compute A value: $\sqrt{A} = \sum_{x=1}^{x=10} \left| \frac{X^2 - 3X}{X + \cos^3 X} \right|$

26. Write a program to compute the sum and count of positive and negative numbers from list of (30) number.
27. Write a program to compute the sum and count of odd and even and summation of all values from list of (N) numbers.
28. Write a program to find y value from the equation $y = X^2 - 4X + 6$ for X value from 0 - 10.
29. Write a python program to input 3 numbers then find the maximum number.
30. Write a python program to input 3 numbers then find the minimum number.
31. Write a python program to print the summation and multiplication of the numbers from 1 to 50.
32. Write a program to find the maximum value from list of given 10 numbers provided by the use.
33. Write a program to compute the summation of following series (use 20 term) $S = 1 + 1/2! + 1/3! + 1/4! + 1/5! + 1/6! + 1/7! + \dots$

34. Using for loop, write a python program to print the figure below

```
*
* *
* * *
* * * *
* * * * *
```

35. Using for loop, write a python program to print the figure below

```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

36. Using for loop, write a python program to print the figure below

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

37. Using for loop, write a python program to print the figure below

```
1 1 1 1 1
2 2 2 2
3 3 3
4 4
```

5

38. Using for loop, write a python program to print the figure below

```
5 5 5 5 5
5 5 5 5
5 5 5
5 5
5
```

39. Using for loop, write a python program to print the figure below

```
1
3 3
5 5 5
7 7 7 7
9 9 9 9 9
```

40. Using for loop, write a python program to print the figure below

```
1
3 2
6 5 4
10 9 8 7
```

41. Using for loop, write a python program to print the figure below

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

42. Using for loop, write a python program to print the figure below

```
* * * * *
* * * * *
* * * *
* * *
* *
*
```

43. Write a python program that accept the string "My Name Is Tony" and print "My**Name**Is**Tony" using output formatting of a print() function
44. Write a python program to convert decimal number to octal using print() output formatting
45. Write a python to accept a list of 5 float numbers as an input from the user and compute the sum of their product.
46. Write a python program to Print multiplication table of a given number from a user.
47. Write a python program to accept 10 integer from user and print the numbers in descending number
48. Write a python program to accept 10 integer from user and print the numbers in ascending number
49. Write a python program that accept a string from user and print the index of each character in the string provided by the user
50. Write a python code to count all **lower case**, **upper case**, **digits**, and **special symbols** from a the string word = "2jj2n&334nnnGGHE)(nSlk/8HEnnnn"