1. Write a program to display the multiplication table for each number from 1 to 10.

```
          Table From 1 to 10
1    2    3    4    5    6    7    8    9    10
2    4    6    8    10   12   14   16   18   20
3    6    9    12   15   18   21   24   27   30
4    8    12   16   20   24   28   32   36   40
5    10   15   20   25   30   35   40   45   50
6    12   18   24   30   36   42   48   54   60
7    14   21   28   35   42   49   56   63   70
8    16   24   32   40   48   56   64   72   80
9    18   27   36   45   54   63   72   81   90
10   20   30   40   50   60   70   80   90   100
```
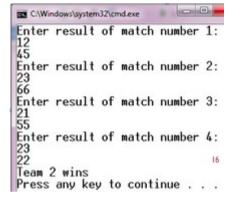
2. Write a program that takes 10 numbers from the user and decide for each number whether it is prime or not.

```
Enter a number:
10
10 is not prime
Enter a number:
3
3 is a prime number
Enter a number:
7
7 is a prime number
Enter a number:
6
6 is not prime
Enter a number:
2
2 is a prime number
Enter a number:
22
22 is not prime
Enter a number:
99
99 is not prime
Enter a number:
345
345 is not prime
Enter a number:
1
1 is a prime number
Enter a number:
9
9 is not prime
```

3.Program reads result of 4 basketball matches (number of goals by two teams).

- For each match, the winner team gets 3 points. In case of tie, each team gets 1 point. The program should display the winner team.

```
C:\Windows\system32\cmd.exe
Enter result of match number 1:
12
45
Enter result of match number 2:
23
66
Enter result of match number 3:
21
55
Enter result of match number 4:
23
22
Team 2 wins
Press any key to continue . . .
```

4. Write a **C++ program** that reads a number and displays whether it is a perfect number or not. A perfect number is the one that equals the sum of its factors (except the number itself). For example: 6 is a perfect number because 6 is divisable by 1, 2 and 3 only. And the sum of those numbers is equal to 6(the number itself). (6=1+2+3).

Sample Run:
Enter a number: 28
28 is a perfect number
Sample Run 2:
Enter a number: 8
8 is not perfect number
Press Y to continue: N

5.Write a C++ Program to Reverse an Integer entered by the user.

Sample Run:

Enter your numbers:

5397

Output:

Reversed number is 7935

6. An approximate value of PI can be calculated using the series given below:

$$PI = 4 \sum_{i=1}^{n} \frac{-1^{i+1}}{2i-1} = 4 * \left(1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} \ldots\right)$$

Write a **C++ program** to calculate the approximate value of PI using this series. The program takes an input n that determines the number of terms in the approximation of the value of PI and outputs the approximation.

Sample Run:

Enter the number of terms in the approximation of the value of PI: 9

PI= 3.25237