Funciones definidas por el usuario en C++

Ejercicios propuestos para el uso de funciones part1

1. Write three different value-returning function, that return the value true if a given number is Even, otherwise return false for Odd. (Tip: use IF, Ternary and Bitwise)

2. Write a value-returning function, isVowel, that returns the value true if a given character is a vowel and otherwise returns false.

3. Write a program that prompts the user to input a sequence of characters and outputs the number of vowels. (Use the function isVowel written in Exercise 2.)

4. Write a function, reverseDigit, that takes an integer as a parameter and returns the number with its digits reversed.
    a. For example, the value of reverseDigit(12345) is 54321; the value of reverseDigit(5600) is 65; and the value of reverseDigit(-532) is -235.

5. Write a program that takes as input five numbers and outputs the mean (average) and standard deviation of the numbers. If the numbers are x1, x2, x3, x4, and x5, then the mean is x = (x1 + x2 + x3 + x4 + x5)/5 and the standard deviation is:

$$s = \sqrt{\frac{(x_1 - x)^2 + (x_2 - x)^2 + (x_3 - x)^2 + (x_4 - x)^2 + (x_5 - x)^2}{5}}$$

    a. Your program must contain at least the following functions: a function that calculates and returns the mean and a function that calculates the standard deviation.