**For loops and while loops**

Complete numbers 35 to 48 two times: first with a **for** loop, and then with a **while** loop.

1. Write an algorithm that calculates the sum of all the integers contained (inclusively) between two positive integer limits entered by the user. The program reads the smallest limit first.  
   Example: the sum of the integers between 5 and 10, inclusively.

1. Create four algorithms, each displaying the corresponding one of the following sequences:  
   1. 5 10 15 20 25 30 35 40
   2. 3 5 7 9 11 13 15
   3. 80 70 60 50 40 30 20
   4. 1 2 6 24 120 720

1. Write an algorithm that reads a positive integer ( > 0 ) and determines whether it is a prime number. (Hint: try dividing the number by the numbers coming before it.) Validate the input.

1. Write an algorithm that displays a table for converting Celsius units into Fahrenheit units. The table should display all of the values from –40 to 40 degrees Celsius, at increments of 5 degrees. The conversion formula is:
2. Write a program that calculates the average of 1000 grades. The program asks the user for each of the grades.

40 – Write a program that reads 1000 numbers and determines the largest and the smallest.