**Problem 1: Count all even numbers in an array**

Algorithm CountEvenNumbers

Input: array of integers A, size N

Output: integer count of even numbers

count <- 0

For i <- 0 to N-1 do

If A[i] % 2 = 0 then

count <- count + 1

End If

End For

Return count

End Algorithm

**Problem 2: Perform various operations on five numbers**

Algorithm ProcessFiveNumbers

Input: none

Output: none

Declare array of integers numbers[5]

Declare integer sum, min, max

Declare float average

// Read in 5 separate numbers

For i <- 0 to 4 do

Output "Enter number ", i+1, ": "

Input numbers[i]

End For

// Calculate the average of the five numbers

sum <- 0

For i <- 0 to 4 do

sum <- sum + numbers[i]

End For

average <- sum / 5.0

// Find the smallest (minimum) and largest (maximum) of the five entered numbers

min <- numbers[0]

max <- numbers[0]

For i <- 1 to 4 do

If numbers[i] < min then

min <- numbers[i]

End If

If numbers[i] > max then

max <- numbers[i]

End If

End For

Output "Average: ", average

Output "Minimum: ", min

Output "Maximum: ", max

End Algorithm

**Problem 3: Read in three numbers and write them all in sorted order**

Algorithm SortThreeNumbers

Input: none

Output: none

Declare array of integers numbers[3]

// Read in 3 separate numbers

For i <- 0 to 2 do

Output "Enter number ", i+1, ": "

Input numbers[i]

End For

// Sort the numbers (using a simple sorting algorithm like bubble sort)

For i <- 0 to 1 do

For j <- 0 to 1 - i do

If numbers[j] > numbers[j+1] then

// Swap numbers[j] and numbers[j+1]

temp <- numbers[j]

numbers[j] <- numbers[j+1]

numbers[j+1] <- temp

End If

End For

End For

// Output the sorted numbers

Output "Sorted numbers: ", numbers[0], ", ", numbers[1], ", ", numbers[2]

End Algorithm