**Section 7.1 – Writing Pseudocode**

Write an algorithm in pseudocode for each description of the input and output.

Input: a1, a2,...,an, a sequence of numbers, where n ≥ 1  
          n, the length of the sequence.  
Output: "True" if the sequence is non-decreasing and "False" otherwise.

Not: A sequence of numbers is non-decreasing if each number is at least as large as the one before.

Input: a1, a2,...,an, a sequence of numbers, where n ≥ 1  
          n, the length of the sequence.  
Output: "True" if there are two consecutive numbers in the sequence that are the same and "False" otherwise.

Input: a1, a2,...,an, a sequence of numbers, where n ≥ 1  
          n, the length of the sequence.  
Output: "True" if there are any two numbers in the sequence whose sum is 0 and "False" otherwise.

Input: a1, a2,...,an, a sequence of numbers, where n ≥ 1  
          n, the length of the sequence.  
Output: "True" if there are any three numbers in the sequence that form a Pythagorean triple.

Note:The numbers x, y, and z are a Pythagorean triple if x2 + y2 = z2.