

- 1 List all the steps used by Algorithm 1 to find the maximum of the list 1, 8, 12, 9, 11, 2, 14, 5, 10, 4.
- 2 Devise an algorithm that finds the sum of all the integers in a list.
- 3 Describe an algorithm that takes as input a list of n integers in nondecreasing order and produces the list of all values that occur more than once. (Recall that a list of integers is **nondecreasing** if each integer in the list is at least as large as the previous integer in the list.)

- 4 Describe an algorithm that interchanges the values of the variables x and y , using only assignments. What is the minimum number of assignment statements needed to do this?
- 5 List all the steps used to search for 9 in the sequence 1, 3, 4, 5, 6, 8, 9, 11 using
 - a) a linear search.
 - b) a binary search.