Design and implement the following programs and understand what they do.

**Exercise 1:** Work exercises 13.2 and 13.3, page 529 (into one program), to write 2 methods: one to shuffle an arraylist of numbers and the second one to sort an arraylist of numbers. Follow the textbook specifications for these methods and then write one test program to test both methods with at least one array list. Display the original array list followed by the shuffled list, follows by the sorted list. Use proper labels for the outputs.

**Exercise 2:** Work exercise 13.6, page 530, to design and implement class `ComparableCircle` that extends class `Circle` and implements interface `Comparable`. Follow the textbook specification for the new class and write a test program as specified.

**Exercise 3:** Work exercise 13.12, page 530, to write a method to sum the areas of all geometric objects stored in an array. Follow the textbook specification for the new method and write a test program as specified in the problem statement.

**Instructions:**

1. Programs must be working correctly.
2. Programs must be completed and checked by the end of the designated lab session.