1. Recreate the add() method for arrays. The method should take an Array of Strings called words and an additional String called w as parameters. It returns a new array that is the same as words but has w added to the end. The length of the new array should be 1 greater than words.

2. Do the same as question 1, but also include an int parameter that represents the index to insert the String w into the Array words.

3. Recreate the remove() method for arrays. The method should take an Array of Strings called words and an int called i as parameters. It returns a new array that is the same as words the String at index i has been removed. The length of the new Array should be 1 less than words.

4. Write a method called addRow that takes a 2D array of ints called matrix and a 1D array of ints called newRow as parameters. The method should return a 2D array that is exactly like matrix but adds newRow as a new row at the end of matrix. How would this be different if you had to add a column?

5. Write a method that takes two sorted lists of Integers as parameters. It returns a new list that contains all the values from both parameters lists in sorted order. For example, if you sent it these two lists:

   {1, 9, 10, 40} {7, 8, 30, 60, 70, 100}

   The method would return a list that looked like: {1, 7, 8, 9, 10, 30, 40, 60, 70, 100}

6. Write a method called shuffle that cuts a list of Strings n times, where n and the list are your parameters. To cut a deck, you choose a random int R that is a valid index in the list. The list should then be reordered such that all the Strings before R are moved to the end of the list. An example of the cut if you had these values for the list and R:

   R = 3, list = {1, 2, 3, 4, 5, 6, 7}

   After one cut, the list would look like: {5, 6, 7, 1, 2, 3, 4}

7. Write a method that removes all the values from an Integer list that are lower than the given int parameter n. How would the answer change if you were supposed to return a new list instead of modifying the parameter list?

8. Write a method called trim that takes a list as a parameter and returns a new list that has the same capacity as its size.

9. Write a method that takes an ArrayList of Strings and turns all the words in the list into ALL-CAPS. What would this answer look like if you instead returned a new list of ALL-CAPS words instead of modifying the parameter list?

10. Write the method sublist that takes an ArrayList as a parameter and two ints, start and end, which represent indices. Return a new ArrayList that contains all the elements from the parameter list, stating at index start and ending at but not including index end. If the indices are invalid, return null instead. How would the answer be different if you had to modify the parameter list instead of returning a new list?