Key to CSE143 Section #1 Problems

1.   Original List   Final List

        {8}   {8}
        {6, 3}   {6, 9}
        {2, 4, 6}   {2, 6, 12}
        {1, 2, 3, 4}   {1, 3, 6, 10}
        {7, 3, 2, 0, 5}   {7, 10, 12, 12, 17}

2. One possible solution appears below.

    public int indexOf(int value) {
        for (int i = 0; i < size; i++) {
            if (elementData[i] == value) {
                return i;
            }
        }
        return -1;
    }

3. One possible solution appears below.

    public void stutter() {
        for (int i = size - 1; i >= 0; i--) {
            elementData[2 * i + 1] = elementData[i];
            elementData[2 * i] = elementData[i];
        }
        size *= 2;
    }

4. One possible solution appears below.

    public void remove(int index) {
        for (int i = index; i < size - 1; i++) {
            elementData[i] = elementData[i + 1];
        }
        size--;
    }

5. One possible solution appears below.

    public void add(int index, int value) {
        for (int i = size; i > index; i--) {
            elementData[i] = elementData[i - 1];
        }
        elementData[index] = value;
        size++;
    }