3. Parts a and b both refer to the following sequence:

7, 2, 5, 8, 6, 1, 4, 3

a) Sort the sequence from smallest to largest using selection sort. Show each step on a new
line, underline the sorted part of the array.

note, selection sort is like for loop, look for smallest or largest and swap with index
1, once done move on to index 2 and do the same

Steps	7	2	5	8	6	1	4	3
1	1	2	5	8	6	7	4	3
2	1	2	5	8	6	7	4	3
3	1	2	3	8	6	7	4	5
4	1	2	3	4	6	7	8	5
5	1	2	3	4	5	7	8	6
6	1	2	3	4	5	6	8	7
6	1	2	3	4	5	6	7	8

b) Sort the sequence from smallest to largest using quicksort. Show each step on a
new line.

Steps	7	2	5	8	6	1	4	3
1	7	2	5	8	6	1	4	3
2	7	2	5	3	6	1	4	8
3	7	2	5	3	6	1	4	8
4	7	2	5	3	4	1	6	8
5	6	2	5	3	4	1	7	8
6	1	2	5	3	4	6	7	8
7	2	1	5	3	4	6	7	8
8	5	1	2	3	4	6	7	8
9	4	1	2	3	5	6	7	8
10	3	1	2	4	5	6	7	8
11	2	1	3	4	5	6	7	8
12	1	2	3	4	5	6	7	8