Worksheet – Selection Sort

You are using the Selection Sort algorithm on the following array:

0	1	2	3	4	5	6	7	8	9	10
9	20	7	18	8	40	35	6	2	11	13

1) In the first pass, what 2 elements are swapped? _____   _____
   Draw the array after the first pass:

0	1	2	3	4	5	6	7	8	9	10

2) In the second pass, what 2 elements are swapped? _____   _____
   Draw the array after the second pass:

0	1	2	3	4	5	6	7	8	9	10

3) In the third pass, what 2 elements are swapped? _____   _____
   Draw the array after the third pass:

0	1	2	3	4	5	6	7	8	9	10

4) In the fourth pass, what 2 elements are swapped? _____   _____
   Draw the array after the fourth pass:

0	1	2	3	4	5	6	7	8	9	10

5) In the fifth pass, what 2 elements are swapped? _____   _____
   Draw the array after the fifth pass:

0	1	2	3	4	5	6	7	8	9	10

6) In general, after n iterations of the loop, _____ elements are sorted and in their correct place.

7) Where in the array are these correctly placed elements located?

8) Would this loop iterate fewer times if your array was already in order?