

SORTING ALGORITHMS

1. Suppose you have the following list of numbers to sort:

[15, 5, 4, 18, 12, 19, 14, 10, 8, 20] which list represents the partially sorted list after three complete passes of insertion sort?

- A. [4, 5, 12, 15, 14, 10, 8, 18, 19, 20]
- B. [15, 5, 4, 10, 12, 8, 14, 18, 19, 20]
- C. [4, 5, 15, 18, 12, 19, 14, 10, 8, 20]
- D. [15, 5, 4, 18, 12, 19, 14, 8, 10, 20]

2. Suppose you have the following list of numbers to sort:

[19, 1, 9, 7, 3, 10, 13, 15, 8, 12] which list represents the partially sorted list after three complete passes of bubble sort?

- A. [1, 9, 19, 7, 3, 10, 13, 15, 8, 12]
- B. [1, 3, 7, 9, 10, 8, 12, 13, 15, 19]
- C. [1, 7, 3, 9, 10, 13, 8, 12, 15, 19]
- D. [1, 9, 19, 7, 3, 10, 13, 15, 8, 12]

3. Suppose you have the following list of numbers to sort: Assume largest value is sorted first.

[11, 7, 12, 14, 19, 1, 6, 18, 8, 20] which list represents the partially sorted list after three complete passes of selection sort?

- A. [7, 11, 12, 1, 6, 14, 8, 18, 19, 20]
- B. [7, 11, 12, 14, 19, 1, 6, 18, 8, 20]
- C. [11, 7, 12, 14, 1, 6, 8, 18, 19, 20]
- D. [11, 7, 12, 14, 8, 1, 6, 18, 19, 20]

4. Given the following list of numbers:

[21, 1, 26, 45, 29, 28, 2, 9, 16, 49, 39, 27, 43, 34, 46, 40] which answer illustrates the list to be sorted after 3 recursive calls to mergesort?

A. [16, 49, 39, 27, 43, 34, 46, 40]

B. [21,1]

C. [21, 1, 26, 45]

D. [21]

5. Given the following list of numbers:

[21, 1, 26, 45, 29, 28, 2, 9, 16, 49, 39, 27, 43, 34, 46, 40] which answer illustrates the first two lists to be merged?

A. [21, 1] and [26, 45]

B. [[1, 2, 9, 21, 26, 28, 29, 45] and [16, 27, 34, 39, 40, 43, 46, 49]

C. [21] and [1]

D. [9] and [16]