# **Order in Coding Comprehension Check**

For questions 1-6, match each vocabulary term to the correct definition:

|  |  |
| --- | --- |
| 1. Insertion Sort | a. an algorithm that splits up the elements in a list into groups and pairs, then recombines them in the correct order |
| 2. Iteration | b. a control flow in which the computer program follows the steps of a code in order |
| 3. Merge Sort | c. an algorithm in which the elements in a list are sorted one by one |
| 4. Selection | d. an algorithm that goes through the elements in a list one by one, choosing the minimum or maximum element |
| 5. Sequencing Sort | e. a control flow in which certain lines of code are skipped over unless certain conditions are true |
| 6. Sequencing | f. a control flow in which certain lines of code are repeated |

1. Insertion Sort –
2. Iteration –
3. Merge Sort –
4. Selection –
5. Sequencing Sort –
6. Sequencing –
7. What is control flow and why is it important for programmers to keep in mind when coding?
8. How can loops and conditions support the work of control flow?
9. What can programmers do to ensure the data provided is useable?
10. Why is it important to have a variety of ways to sort and organize data? (Data Sorting, Insertion Sort, Selection Sort, Merge Sort, p. 16-29)

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1. Insertion Sort – c
2. Iteration – f
3. Merge Sort – a
4. Selection – e
5. Sequencing Sort – d
6. Sequencing – b
7. What is control flow and why is it important for programmers to keep in mind when coding?
   1. Control flow is the order in which a computer follows the steps of a computer program. It is important for programmers to keep control flow in mind when coding because programs will not produce the intended outcome if they are out of order or otherwise unorganized.
8. How can loops and conditions support the work of control flow?
   1. Elements like loops and conditions can be used to support the work of control flow. Adding these elements tells the computer when to carry our specific program instructions and allows the programmer to be in more control of the flow of their program.
9. What can programmers do to ensure the data provided is useable?
   1. In order to ensure data is in a useful order, programmers can organize or sort their data by certain attributes. Frequently, programmers will use data sorting algorithms to make sure their data is organized in a useful way.
10. Why is it important to have a variety of ways to sort and organize data? (Data Sorting, Insertion Sort, Selection Sort, Merge Sort, p. 16-29)
    1. It is important to have a variety of ways to sort and organize data because different programs require different sorting methods. In addition to insertion, selection, and merge sorts, other sorting algorithms exist, such as the divide-and-conquer sorting method. Programmers should know a variety of ways to sort data so they can choose the best method for their intended purpose.