

Name : _____ Date : _____

A+ Big O Worksheet 1

Fill in each of the following blanks. (100 points)

1. The _____ sort has a best case run time of $O(N)$.
2. The _____ sort has a best case run time of $O(N \cdot \log_2 N)$ and a worst case run time of $O(N^2)$.
3. _____ is the Big O for adding to the front of an array.
4. _____ is the Big O for adding to the front of a linked list.
5. _____ is the Big O for adding an item to a TreeSet.
6. _____ is the Big O for adding an item to a HashSet.
7. The Bubble Sort has a best case run time of _____.
8. The Quick Sort has a best case run time of _____.
9. The Merge Sort has a best case run time of _____.
10. The Quick Sort has a worst case run time of _____.
11. The Merge Sort has a worst case run time of _____.
12. The Insertion Sort has a best case run time of _____.
13. The Insertion Sort has a worst case run time of _____.
14. _____ is the Big O for adding to the middle of an array.
15. _____ is the Big O for adding to a binary search tree.
16. _____ is the Big O for adding to the end of an ArrayList.
17. _____ is the Big O for deleting an item from an ArrayList.
18. _____ is the Big O for traversing a binary search tree.
19. _____ is the Big O for searching a binary search tree.
20. _____ is the Big O for deleting an item from a linked list assuming that you know the location of the item to delete.