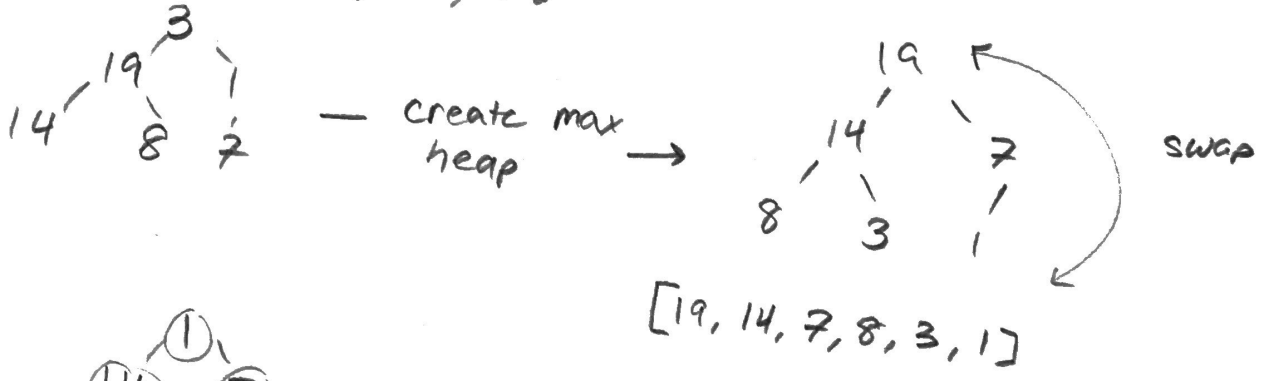
Q. What is heapSort?

A. An algorithm to sort using a heap data structure and sorting the root (maxValue) at the end of an unsorted collection.

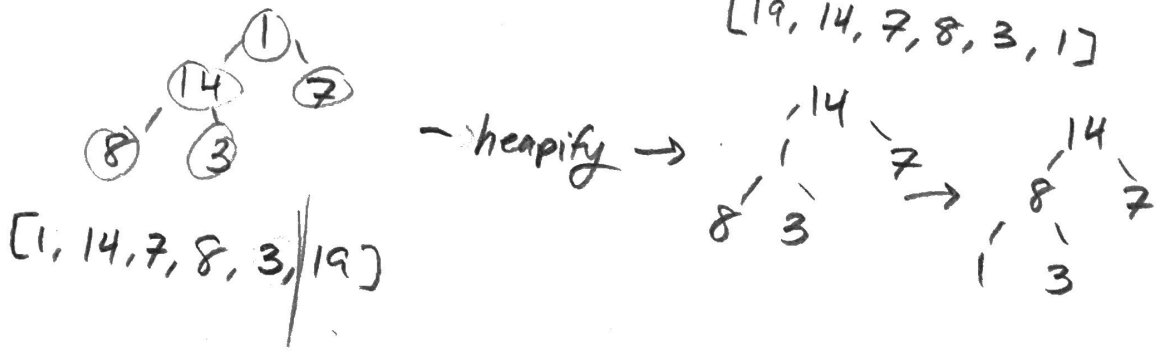
Q. What are the steps for heap sort?

A. 1. Build max heap (build maxheap function)
2. Swap first and last nodes
3. Maintain heap order property by bubbling down node using heapify function.

[3, 19, 1, 14, 8, 7]




[19, 14, 7, 8, 3, 1]




[1, 14, 7, 8, 3 | 19]

[14, 8, 7, 1, 3 | 19]

continue steps...

Q. What is run time to build MaxHeap?

A O(n) → All items added to heap

Q. What is run time of heapify

A. O(log n)

Q. Run time of heap sort

A. O(n log n)

Q. What is space complexity of heapsort?

A. O(1) In place

Q. Is heap sort Stable?

A. No (Deals w/ duplicates - can't guarantee its order.

Q. Is heap sort recursive?

A. No