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CS 2134 HW 1

1. It will print 12,10,5. The problem is that there is no destructor so the allocated memory stays in the heap. Another issue is the line myA1= myA3; since myA1's data (array) isn't getting deleted, a memory leak has occurred.

2a) O(log(n))
2b) O(nlog(n))
2c) O(log(n))
2d) O(n^2)
2e) O(n^2)
2f) O(1)

3. delete [] is used to de-allocate memory that is used for array of objects while delete is used to de-allocate memory used for a single object.

4a) O(n)
4b) O(1)

5a) O(n)
5b) O(1)

6a) Function 3 is called
6b) Function 2 is called
6c) Function 3 is called
6d) Function 1 is called

7a) lvalue
7b) lvalue
7c) rvalue
7d) lvalue

8d) name is a local variable inside the function. When the function is finished calling, it is out of scope therefore the function can't return it by reference. The function can only call it by value where it makes a copy of the local variable.