CS 2401 Spring 2023

**Lab 4: Dynamic Arrays and The Big 3**

**Due: Friday 2/17 at 11:59 PM**

Type your answers on this sheet making sure to list the question numbers.

1. 2 4 6 8 10 12 14

2 4 6 5 10 15 14 Total bytes allocated = 120

1. This is a problem, because there is a memory leak, and the original data is gone.
2. The assignment operator was not overloaded and because of this the line assigning N2 to N1 only changed the address that N2 pointed to and not the actual data.
3. 2 4 6 8 10 12 14

2 4 6 8 10 12 14 Total bytes allocated = 120

1. This is different because now whenever N2 is modified it does not also modify N1.
2. This was happening because the assignment operator made them share addresses, it no longer because now it copies all data from the passed object into the new one without copying the address.
3. 0x55b7fcd60240

0x55b7fcd60570

0x55b7fcd608a0

0x55b7fcd60bd0

0x55b7fcd60f00

1. 1 byte = 8 bits

57016 = 139210

24016 = 57610

1392 – 576 = 816 bits

816 / 8 = 102 bytes of separation

1. There were still 5 addresses, but they were all the exact same address.
2. The byte count is a count of how much memory is allocated for the storage of data.
3. The deconstructor allowed for this new behavior because the same memory address could be used each time as it was allocated after deallocating.