**Chapter 3 Notes**

*Asymptotic notation*: When input sizes are large enough so that only the order of growth matters.

Natural Numbers start at 0 in algorithms.

Insertion Sort has a worst-case of an2 + bn + c, so its notated at *(use theta instead of O though)* O(n2)

For O (theta) there is a lower and upper bound

O(g(n)) = a <=b

Omega(g(n)) = a>=b

Theta(g(n)) = a = b

o(g(n)) = a < b

omega(g(n)) = a > b

Trichotomy: for a and b, only one of these can be true:

a < b, a > b, a = b