**Homework Assignment #1**

**Read sections**: 2-5, 2-6, 2-7, 2-8 starting on page 57 in the online textbook.

**Self Guided Notes**

* Know how to represent delta distance, delta time, delta velocity and constant acceleration. Know what these mean.
* Know formula distance, average velocity when acceleration is constant.
* Know formula for acceleration using velocity and time components.
* Know formula for final position when velocity is not constant, but acceleration is.
* Be familiar with the 5 kinematics equations found on page 64.
* Describe the effects of gravity on objects in motion, describe the motion of objects that are in free fall, Calculate the position and velocity of objects in free fall.
* Understand and be able to use “g” the acceleration due to gravity. Understand why a falling object has a –g value if upward movement is considered positive.
* Understand the kinematic equations that include gravity (g).
* Review the use of y = mx + b. Understand the independent (manipulated) variable is plotted on the x axis. The independent (responding) is on the y axis.
* Understand how distance vs time, velocity vs time, acceleration vs time graphs compare. Understand what the slope of each of these graphs represent.
* Understand the concept of instantaneous velocity and how to calculate it using slope.

**Problems for sections:** 2-5, 2-6, 2-7, 2-8 that start on page 91.

Work the following problems in line with your notes. Please show your work and find a way to include the question and answer.

Problems and exercises starting on page 91: 20, 22, 41, 44, 64, and 66. (20, 22, 41, 44, 64 and 66) AP problems 5, 7 starting on page 95