AP Physics Homework
Due Wednesday 9-4-12

1. Memorize the Four Kinematic Equations:

$v_f = v_i + a \cdot \Delta t$	$\Delta x = \left(\frac{v_i + v_f}{2}\right)\Delta t$
$\Delta x = v_i \cdot \Delta t + \frac{1}{2}a(\Delta t)^2$	$v_f^2 = v_i^2 + 2a \cdot \Delta x$

2. Finish the summer reading assignment

3. An object is dropped off of a cliff that is 60 m tall.
All objects that are falling have an acceleration of 9.8 m/s^2 downward.
Ignoring air resistance, use one of the four kinematic equations to determine the time it takes for the object to reach the ground.
Please write the equation you chose before plugging numbers in, then show your algebraic process to solve the problem

4. Somebody in a car accelerates forward for 5 seconds and then moves at a constant velocity for the next 15 seconds.
Draw a position-time, velocity-time, and acceleration time graph of the cars motion.

You can represent the y-axis of each graph *qualitatively* (without numbers), but represent the x-axis *quantitatively* (with numbers).