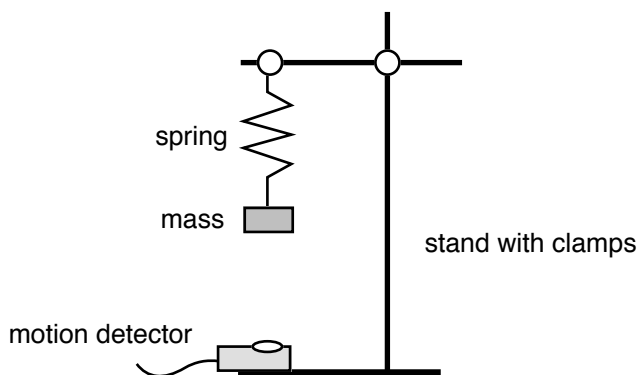


Pre-Lab 15-3: SHM Energy Conservation

- Purpose:**
1. To analyze the energy transformations of a mass oscillating on a spring
 2. To predict a variety of graphs concerning the motions and energies of an oscillating mass, and then confirm (or refute) those predictions

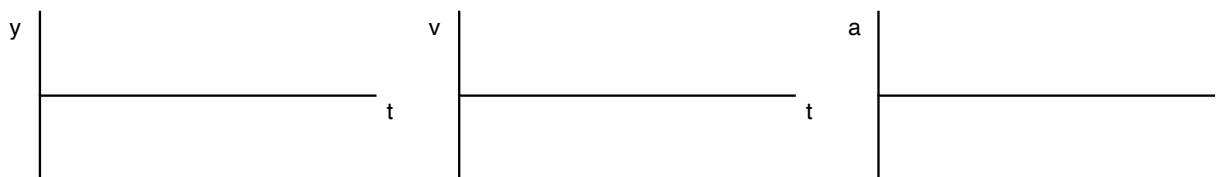
Diagram:



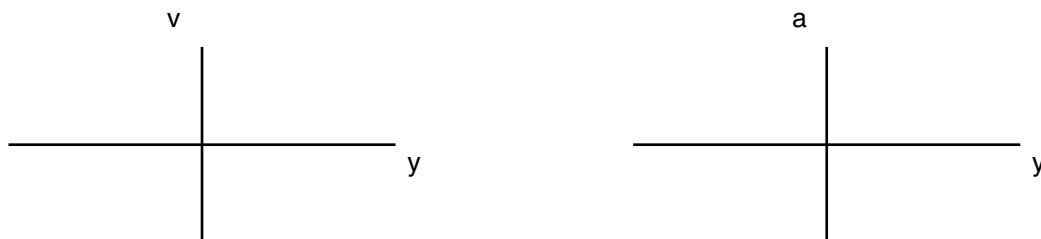
Procedure:

You will set up the above after completing this pre-lab sheet. After discussing in your lab group, sketch what you think the following graphs will look like. Once you are done, then you can proceed with the lab itself (which is a separate handout.)

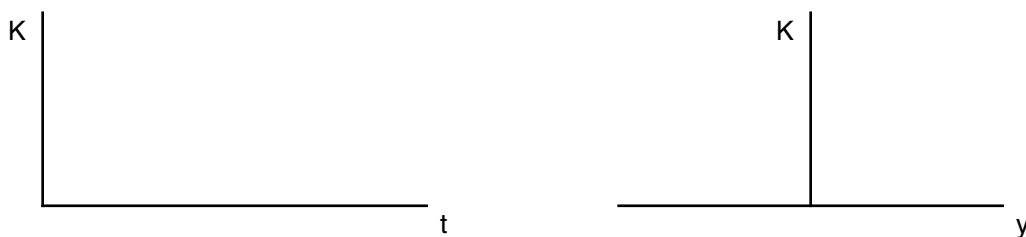
Part 1: Position, Velocity and Acceleration verses time of the oscillating mass.



Part 2: Velocity and Acceleration verses Position

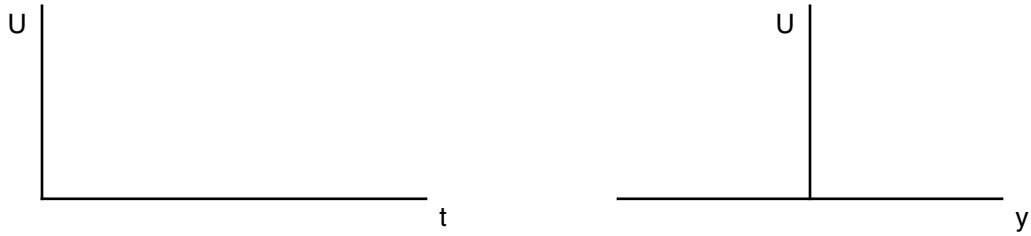


Part 3: Kinetic Energy verses time & Kinetic Energy verses position



Pre-Lab 15-3: SHM Energy Conservation

Part 5: Potential Energy verses time & Potential Energy verses position



Part 7: Three graphs at once: Kinetic, Potential and Total Energy of Mass verses time



Part 8: Three graphs at once: Kinetic, Potential and Total Energy of Mass verses position

