Physics 8A: Wed Sept 18

Review from Last Time:

- Strategy for solving force problems:
  1. If we are given several forces, find the net force by taking the vector sum of all the forces on the object
  2. Once net force is known, use $\vec{F} = m\vec{a}$ or
     $$\vec{a} = \frac{\vec{F}}{m}$$
     Solve simultaneous equations to find what is requested:
     - Given $\vec{F}$ solve for $\vec{a}$
     - Given $\vec{a}$ and some addition information (eg initial conditions) can solve for the motion of the object

- To find the net force:
  1. Identify the object of interest and the forces acting on it
  2. Represent the object as a dot and show vectors for all forces acting on the object with their tails on the dot
  3. Use vector addition either graphically or using components to find the net force
     - If using components, write each of the forces as

       $$\vec{F} = F_x\hat{i} + F_y\hat{j} + F_z\hat{k}$$

       and separately add the components
     - Choose your coordinate system appropriately

Today: Wolfson 4.6
Fri: Wolfson 5.1-5.2

HW # 3 is due Friday at 11PM!