PreAP: due Mon., Oct 24 (Assigned: Thurs., Oct 20)
Reg: due Tues., Oct 25 (Assigned: Fri., Oct 21)

Ramps 1—Test soon!

1. When a car at a stop sign accelerates, what does your body feel and why?

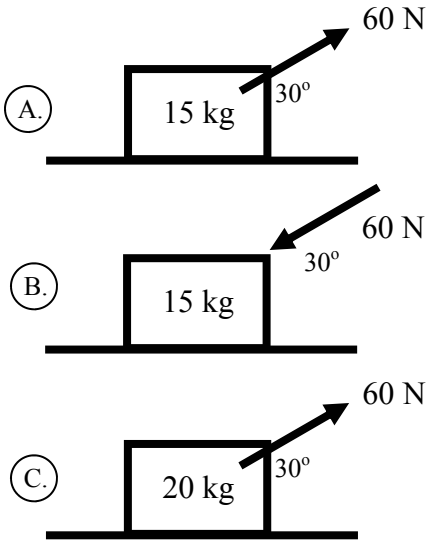
2. When a car slows down to a stop, what does your body feel and why?

3. When a car turns to the left what does your body feel and why?

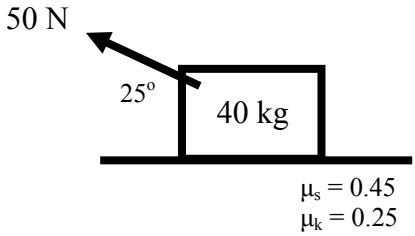
4. When you are going at constant speed what does your body feel and why?

5. Use the 3 objects (A—C) at the right to answer these questions:
   A. Which object feels the most normal force?
   B. Which object feels the least normal force?
   C. In each instance what must you do to the force?
   D. In each instance how do you find the normal force?

   E. In which instance is the friction the greatest?
   F. In which instance is the friction the least?



6. For the 40 kg object find:
   A. Will it move?
   B. If not, what F_{add} is needed
   C. If so, find "a".



7. A 5.5 kg object is on a 38° ramp. ($\mu_s = .62$; $\mu_k = .35$) ***You MUST draw a diagram.***
   A. Will it move?
   B. If not, what F_{add} is needed
   C. If so, find "a".

8. If for every force there is an equal and opposite force, how is it that you can apply a force to a wagon and it move?

ON BACK FOR TAKS

9. You mix 25 g of chemical X with 12 g of chemical Y.
   Two chemicals are formed (R and T): chemical R is 30 g:
   A. What is the mass of your reactants?
   B. What will be the mass of your products?
   C. What rule of chemistry tells you your answer for "B. above"?
   D. If the sum of your products does not equal your reactants, what can you say about the experimental setup?

$$\_\_Ca + \_\_H_2O \longrightarrow \_\_Ca(OH)_2 + \_\_ H_2$$

10. Balance the above reaction.

11. Put a star over the first product and a name the second reactant.