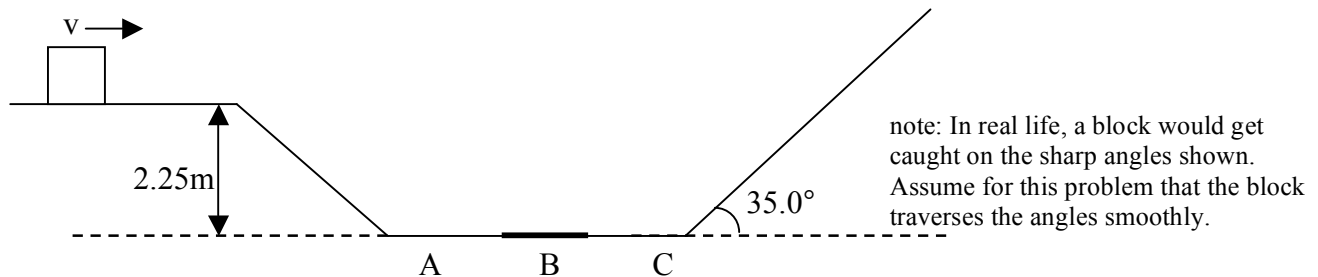# HW Set #12 due Tuesday 11/20 before the test!

From Chapter 9:

p286   #1 problem 39

p287   #2 problem 59 (What type of collision is this? What is conserved?)

#3 A block of mass 7.50 kg is sliding to the right along a frictionless surface at v = 1.50 m/s as shown below. A rough patch of length 2.50 m is at point B. This patch exerts a constant force of magnitude 3.00 N on the block. <u>The block slides back and forth between the two ramps.</u>

note: In real life, a block would get caught on the sharp angles shown. Assume for this problem that the block traverses the angles smoothly.

A) How many times will the block cross the rough patch?
B) Where will the block <u>finally</u> stop? (Be specific!)
C) Which ramp (left or right) does the block go up last? Explain your answer.
D) On the last trip up the ramp from part C, how high up does the block go?