PHYS 111
HOMEWORK #10

Due : 18 Nov. 2014

1. Question 8 from homework 9.

2. Question 9 from homework 9.

3. After a completely inelastic collision between two objects of equal mass, each having an initial speed v, the two move off together at a speed v/3. What was the angle between their original directions?

4. A standard baseball has a mass of 0.145 kg. A baseball is thrown toward a batter with a speed of 39 m/s and hit on a horizontal line directly back along its direction of motion. If the contact time between bat and ball is 0.001 s, what is the average force between the ball and bat during contact.?

5. A particle of mass m traveling with speed v collides elastically with a target particle (initially at rest) of mass 2 m and is scattered at 90^o (this means after collision, the bombarding particle moves in a direction 90^o to its original motion). a) At what angle does the target particle move after collision? b) What are the final speeds of the two particles? c) What fraction of the initial KE ($\Delta KE/KE$) is tranferred to the target particle?