Energy Review
Chapter 11 Rev. 1

1. a) How much KE does a 16.0 N rock have it is traveling at 133 km/hr?

   b) How much PE would it have if it flies 22.0 m above the ground?

2. A 255 g ball is struck with a 4.32 kg bat with a force of 215 N. If the contact time is 0.0667 s. a) What is its KE?

   b) How high would it go if it went straight up?

   c) What would its PE be at the top of its flight?

   d) How much work was lost to friction if it only went 100.0 m up?

3. How fast would she have to run to have the same KE she would have if you dropped her (Jenn) from 4.5 m?…probably wouldn't much…just enough to command reverent fear and respect!!!

4. A girl in a tree (Becca) fires a 955 kg rock straight down to the ground using a force of 195 N over 1.30 m of release distance. What speed

would the rock hit the ground at if it is released 11.5 m above the surface?

5. A 565 g cart traveling at 1.75 m/s strikes a 625 g cart that is stationary. The two carts stick together after the collision, a) what is the speed of the combined carts?

   b) How much work is lost to friction?…..(hint- compare the KE before to after)

6. A 55.0 g pendulum is 0.200 m above the table. a) If it is pulled back to a position so that is 0.350 m above the table, how much PE does it have?

   b) What speed does it attain as it passes the equilibrium position?

   c) How much work is done to overcome friction if it attains a speed of 1.53 m/s?