Review:

1. What conditions have to be met before work is considered to be done in physics?

2. What is an elastic collision?

3. What is an inelastic collision?

4. If velocity is halved, by what factor does the kinetic energy increase?

5. How does mass affect rebound? If mass is increased in a collision and speed is maintained how would the rebound be different?

6. In a bounce where is the most GPE?

7. What is most damaging to the occupants of a car crash? (elastic, inelastic, time)

8. Where is the most total mechanical energy on a roller coaster track?

9. Calculate work done on a box using these variables:

a) 3.3 kg mass, 200.00 cm displacement, 24 degree angle to the horizontal.

b) 5 N force, 1 meter displacement, 180 degree to the horizontal.

c) 5 N force, 2 meter displacement, 90 degree to the horizontal.

10. Calculate momentum of the following:

a) 4.5 kg ball with a velocity change from +20.0 m/s to +23.5 m/s

b) 4 N force for .005 seconds.

c) 7 kg ball with a velocity of 2 m/s

11. Calculate PGE of the following:

a) mass 7 kg, height of 5 m

b) Mass of 8 kg on Mars (3.71 m/s/s) 25 m height

12. A 50 kg person steps off the roof that is 15 m above the pool. What is their velocity at 3 m above the water? (neglect air resistance)

13. Ball A has a mass of 18000 g, it is traveling at 36 m/s to the right when it collides with Ball B. Ball B has a velocity of 18 m/s to the left and mass of 22000 g. If the velocity of Ball after the collision is 15 m/s to the left, what is the velocity of Ball B after the collision?