# Classwork 3/23

1. A 1.0 kg pool ball moving to the right at 2.5 m/s collides with another 1.0 kg ball moving to the left at 1.8 m/s, After the collision, the first ball moves to the left at 1.8 m/s

   a) What is the final velocity of the 2nd ball?

   b) Verify that the collision is elastic $KE_o = KE_f$

2. A 16.0 kg canoe moving to the right at 12.5 m/s makes an elastic head on collision with a 14.0 kg raft moving to the left at 16.0 m/s. After the collision, the raft moves to the right at 14.4 m/s

   a) Find the velocity of canoe after the collision

   b) Compare $KE_o$ & $KE_f$ to verify that the collision is elastic

$p_o = p_f$

$M_1 V_{1o} + M_2 V_{2o} = M_1 V_{1f} + M_2 V_{2f}$ For collision between two objects

$KE = \frac{1}{2} M v^2$