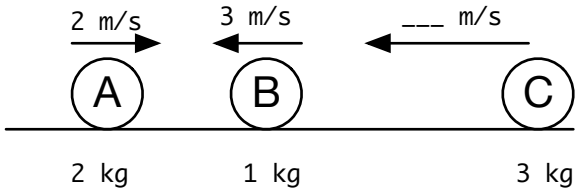
Corona Wk 6 Conservation of Momentum

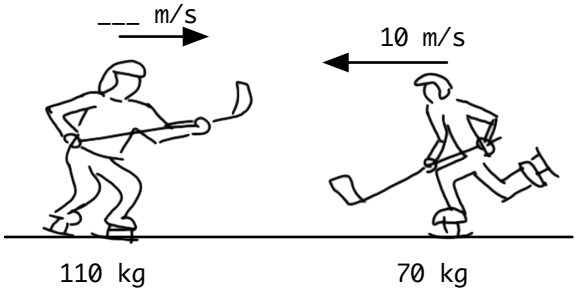
2. Total Momentum

FOR ALL PROBLEMS, ASSUME THERE ARE NO OUTSIDE FORCES

1. a) Find the total momentum of the system.
   b) If B were to collide with A, and then rebound and collide with C, what would the total momentum be?

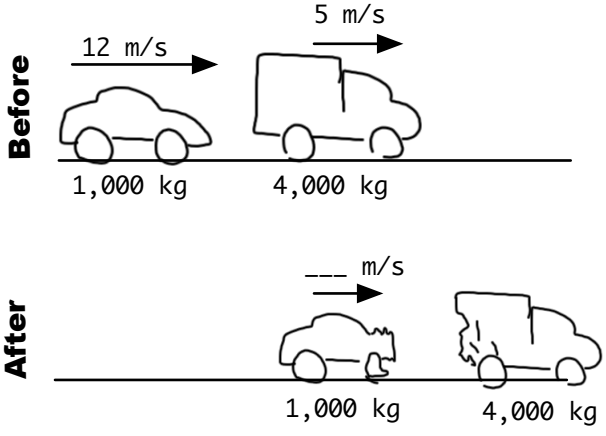
(Make up a velocity for C that is between 5 and 10 and has one decimal place.)





2. a) Find the total momentum.
   b) If they were to collide and hold on to each other, what would their combined momentum be?
   c) Which way would they be moving?

(Make up a velocity for the player on the left that is between 6 and 0 and has one decimal place.)



3. a) Find the total momentum before the collision.
   b) What should the total momentum after the collision be?
   c) Calculate the momentum of the car after the collision and deduce what the truck's momentum must be.

Choose a velocity for the car afterward that is less than 10 m/s and has one decimal place.