Ex #1) A (Mostly) *Elastic* Collision A 5-kg bowling ball is rolling at a speed of 10 m/s toward a stationary 2-kg soccer ball. After the collision, the bowling ball is still moving at 4.1 m/s. How fast is the soccer ball moving?

Ex #2) A Totally *Inelastic* Collision   A sports car with a mass of 1000 kg is traveling **east** with a velocity of 45 m/s. It decides to play chicken with a semi-truck with a mass of 9000 kg and a velocity of 14 m/s to the **west**. After impact, the vehicles stick together. What is the final velocity of the combined vehicles?

Ex #3) Recoil   A 1500-kg cannon fires a 8.3-kg cannonball at a speed of 32 m/s. How fast does the cannon recoil?