

Physics 200B Prelab 9

Name: \_\_\_\_\_

Please read over lab 9 and answer the questions below:

1. *Prediction:* What is your Prediction 1-1? Briefly state your reasoning.

2. What is the difference between an elastic and an inelastic collision?

3. In Activity 2-1, why does the software reverse the sign of one of the force probes?

4. In Activity 3-1, you will collide a more massive cart and a less massive cart together. Will both carts be moving before the collision, or only one? If both will be moving, will they be moving in the same direction or opposite directions? If only one will be moving, which one?

5. A car with mass 1000 kg is moving to the north with a speed of 40 m/s. A truck with mass 2000 kg is moving to the south with a speed of 30 m/s. What is the total momentum of the car-truck system? (Don't forget that momentum is a vector!)