

Name:

Period:

Momentum-Impulse Worksheet

Read pages 86 – 92 in the textbook, then answer the following questions:

- 1) Which has the greater mass, a heavy truck at rest or a skateboard in motion? Which has greater momentum?

- 2) Distinguish between impact force and impulse.

- 3) When the force of impact on an object is extended in time, does the impulse increase or decrease?

- 4) In a car crash, why is it advantageous for an occupant to extend the time during which the impact takes place?

- 5) Why is more impulse delivered during a collision when bouncing occurs than during one when it doesn't?

- 6) In a 1973 traffic fatality, a driver fell asleep at the wheel while crossing a Portland bridge. His VW hit a concrete bridge support at a speed of 20 m/s (about 44 mph). It took the bridge support an estimated .05 seconds to bring the 700 kg VW to a complete stop. Calculate the force that the car experienced during the collision.