

Name: _____ Date: _____ Period: _____

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Period:

Momentum #2

1. A 900-kg car traveling at 13 m/s runs into an 1100-kg van that is at rest. The cars stick together after the collision. How fast do they go?

2. A red 400-kg bumper car is traveling at 8 m/s. It hits the back of a stationary 155-kg green bumper car. After the collision, the red car has a velocity of 3.3 m/s (still forward). What is the final velocity of the green car?

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3. A 6 kg fish swims toward and swallows a 2 kg fish that is at rest. If the larger fish swims at 1 m/s, what is its velocity immediately after lunch?

4. A 0.25-kg tennis ball is thrown against a wall at 7 m/s. It rebounds at a speed of 4 m/s. If it is in contact with the wall for 0.004 seconds, what force is applied to it by the wall?