Name: _____ _____/ 8

Chapter 3.2 Homework
Conceptual Physics Parent Signature: _____

Reviewing Concepts

6. What is the net force of an object with zero acceleration? (1)

7. Which of the following have zero acceleration? (2)

a. a car moving forward at a constant velocity

b. a kicked ball

c. a skater turning left

d. a parked car

8. Write the equation for Newton's second law that you would use in each of the following scenarios. Let F = force, m = mass, and a = acceleration. (1)

a. You know mass and acceleration and want to find the force.

b. You know mass and force and want to find the acceleration.

c. You know force and acceleration and want to find the mass.

9. Provide an example of Newton's second law in everyday life. (1)

Solving Problems

3. Use your knowledge of Newton's second law to answer the following:

a. What is the net force required to accelerate a 1,000-kg car at 3 m/s^2? (1)

b. You pull your little cousin in a wagon. You must pull with a net force of 50 N to accelerate her at 2 m/s^2. What is her mass? (1)

c. A 1,500-N force is applied to a 1,000-kg car. What is the car's acceleration? (1)