

Section Review

Newton's Laws of Motion

USING KEY TERMS

1. In your own words, write a definition for the term inertia.

UNDERSTANDING KEY IDEAS

- _____ 2. Which of the following will increase the acceleration of an object that is pushed by a force?
- a. decreasing the mass of the object
 - b. increasing the mass of the object
 - c. increasing the force pushing the object
 - d. Both (a) and (c)

3. Give three examples of force pairs that occur when you do your homework.

4. What does Newton's first law of motion say about objects at rest and objects in motion?

5. Use Newton's second law to describe the relationship between force, mass, and acceleration.

Section Review *continued*

MATH SKILLS

6. What force is necessary to accelerate a 70 kg object at rate of 4.2 m/s^2 ? Show your work below.

CRITICAL THINKING

7. **Applying Concepts** When a truck pulls a trailer, the trailer and truck accelerate forward even though the action and reaction forces are the same size but are in opposite directions. Why don't these forces balance each other?

8. **Making Inferences** Use Newton's first law of motion to explain why airbags in cars are important during head-on collisions.

INTERPRETING GRAPHICS

9. Imagine you accidentally bumped your hand against a table, as shown in the image below. Your hand hurts after it happens. Use Newton's third law of motion to explain what caused your hand to hurt.


