

Section Review

Gravity: A Force of Attraction

USING KEY TERMS

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

2. Use each of the following terms in a separate sentence: *mass* and *weight*.

UNDERSTANDING KEY IDEAS

- _____ 3. If Earth's mass doubled without changing its size, your weight would
- a. increase because gravitational force increases.
 - b. decrease because gravitational force increases.
 - c. increase because gravitational force decreases.
 - d. not change because you are still on Earth.

4. What is the law of universal gravitation?

5. How does the mass of an object relate to the gravitational force that the object exerts on other objects?

6. How does the distance between objects affect the gravitational force between them?

7. Why are mass and weight often confused?

Section Review *continued*

MATH SKILLS

8. The gravitational force on Jupiter is approximately 2.3 times the gravitational force on Earth. If an object has a mass of 70 kg and a weight of 686 N on Earth, what would the object's mass and weight on Jupiter be? Show your work below.

CRITICAL THINKING

9. **Applying Concepts** Your friend thinks that there is no gravity in space. How could you explain to your friend that there must be gravity in space?

10. **Making Comparisons** Explain why it is your weight and not your mass that would change if you landed on Mars.
