Name Period Date

SECTION 3.1 | GRAVITY IS A FORCE EXERTED BY MASSES.

Section Quiz

Key Concepts

Choose the letter of the best answer.

____ **1.** The strength of the gravitational force between two objects depends on the objects'
- **a.** masses and the distance between them
- **b.** weights and accelerations
- **c.** momentum and velocities
- **d.** masses and velocities

____ **2.** Joseph throws a baseball straight forward. At the same time, Corey drops a baseball from the same height. Which of the following is TRUE?
- **a.** Joseph's baseball falls faster than Corey's.
- **b.** Corey's baseball falls faster than Joseph's.
- **c.** Both baseballs fall at the same rate.
- **d.** You cannot predict which baseball will fall faster.

____ **3.** A satellite in orbit
- **a.** is not affected by gravity
- **b.** is always falling toward Earth
- **c.** must have a speed less than 8000 m/s
- **d.** cannot fall more than 5 m

____ **4.** An astronaut in an orbiting spacecraft floats because
- **a.** Earth's gravity is too weak to affect the spacecraft
- **b.** the spacecraft and the astronaut fall at the same rate
- **c.** there is no force of gravity in space
- **d.** the spacecraft has a low acceleration

Extended Response

Answer the following question on the back of this paper or on a separate sheet of paper.

An astronaut has a mass of 65 kg. The pull of gravity on the Moon's surface is much less than the pull at Earth's surface. Compare the astronaut's mass and weight on Earth with his or her mass and weight on the Moon. Be sure to distinguish between *mass* and *weight* in your answer.