

# 11 Gravity and the Solar System

ANTICIPATION GUIDE FOR SECTIONS 7.2 and 7.3

Name \_\_\_\_\_  
Inquiry Physics

## Instructions

**Before** reading pages 240-253 in your text, place a check mark (✓) in the space to the left of each of the statements with which you agree.

Then, during or after the reading, cross through those you wish to change (✗), and check any new ones you find to be true. **Below each statement indicate the page and paragraph in the reading that supports or refutes the statement.** For example, if what is stated on page 251 in paragraph 2 supports a statement, make sure it has a check mark and write "251-2" below the statement. If that area of the text shows the statement is wrong, make sure it is blank or cross through its check mark and write "251-2" below the statement.

- \_\_\_\_\_ 1. Newton said that you could shoot a cannonball so fast straight upward that it would enter orbit.  
NOTE PAGE AND PARAGRAPH THAT SUPPORTS OR REFUTES THIS:
- \_\_\_\_\_ 2. For calculation purposes, we treat a planet's mass as if it were all concentrated at its center.  
PAGE AND PARAGRAPH:
- \_\_\_\_\_ 3. Tides are caused by the moon pulling the water up toward the moon.  
PAGE AND PARAGRAPH:
- \_\_\_\_\_ 4. Newton invented a theory of fields to explain how gravity and other field forces operate.  
PAGE AND PARAGRAPH:
- \_\_\_\_\_ 5. When an object is pulled downward by a planet, the gravitational field strength depends on the mass of the object.  
PAGE AND PARAGRAPH:
- \_\_\_\_\_ 6. Copernicus proposed that the sun and other planets orbit the Earth in perfect circles.  
PAGE AND PARAGRAPH:
- \_\_\_\_\_ 7. Planets travel slower when they are farther from the sun.  
PAGE AND PARAGRAPH:
- \_\_\_\_\_ 8. With Kepler's third law one can predict the length of a planet's year if you know its average distance from the sun.  
PAGE AND PARAGRAPH:
- \_\_\_\_\_ 9. Astronauts floating in a space shuttle are weightless.  
PAGE AND PARAGRAPH:
- \_\_\_\_\_ 10. In deep space, far from stars and planets, an object would maintain a steady orbit.  
PAGE AND PARAGRAPH: