Name _____ Date _____ Period _____

Worsheet: Universal Graviation
CHAPTER 13: UNIVERSAL GRAVITATION

Directions: *Answer the following questions based on your textbook (Chapter 13) . You must write at least one full paragraph for each essay question.*

$$F = G \frac{m_1 m_2}{d^2}$$

1. Discuss how the force of gravity between two masses depends on the size of their masses and the distance between them. Give a numerical example.

2. The text claims that the moon is falling around Earth. Explain what this means. How is tangential velocity related to this? Why doesn't the moon collide with Earth?

3. If the moon orbited Earth at a distance twice what it is now, would the moon be moving faster, slower, or with the same speed as today? Explain. What would happen to the length of the month?

4. If Earth had twice its present radius and twice its present mass, what would happen to your weight? Explain.