NOT TO BE TURNED IN!
Complete and understand the Review and Discussion questions and the Problems to prepare for the quizzes.

**Review and Discussion:**
Q1. Describe three differences between terrestrial and jovian planets.

Q9. Describe the basic features of the nebular theory of solar system formation, and give three examples of how this theory explains some observed features of the present-day solar system.

Q14. How do astronomers detect extrasolar planets?

Q15. In what ways do observed extrasolar planetary systems differ from our own solar system?

**Problems:**
Also do the following problems:

1. How much greater is the force of gravity felt by the Sun due to Jupiter versus that felt by the Sun due to the Earth? Now compare the force of gravity the Sun would feel if Jupiter were at the distance of the Earth (use 1 AU). How much greater is it than the force exerted by the Earth at 1 AU?

**The force would be 317 times stronger than that due to the Earth.**

2. In 1888 Heinrich Hertz “invented” radio transmission. (Recognize the unit name?) If the first radio transmissions were broadcast in 1988, how far have they traveled from the Earth as of 2007? Give your answer in km and lightyears. Compare this to the size of the solar system (Neptune’s orbit).

**1.2 x 10^6 AU or 19 lightyears.**