# CH 1

**Vocabulary ALL (DUE 1/3)**

field of view
scientific notation
planet
star
solar system
astronomical unit
light-year
Milky Way
Milky Way Galaxy
galaxy
spiral arm
scientific method

**Review Questions 2-9 (DUE 1/3)**

2. What is the difference between our solar system, our galaxy, and the universe?

3. Why are light-years more convenient than miles, kilometers, or astronomical units for measuring certain distances?

4. Why is it difficult to detect planets orbiting other stars?

5. What does the size of the star image in a photograph tell you?

6. What is the difference between the Milky Way and the Milky Way Galaxy?

7. What are the largest known structures in the universe?

8. How does astronomy help answer the question, "What are we?"

9. How does the scientific method give scientists a way to know about nature?

**Problems 2-5, 9-10 (DUE 1/3)**
Give your answers in scientific notation when appropriate.

2. The equatorial diameter of Earth is 7926 miles. If a mile equals 1.609 km, what is Earth's diameter in kilometers? In centimeters? (This is a two-part question!)

3. One astronomical unit is about $1.50 \times 10^8$ km. Explain why this is the same as $150. \times 10^6$ km.

4. Venus orbits 0.72 AU from the sun. What is that distance in kilometers? (*Hint: see problem 3.*)

5. Light from the sun takes 8 minutes to reach Earth. How long does it take to reach Mars? (*Hint: Use ratios.*)

9. The nearest galaxy to our own is about 2.5 million light-years away. How many meters is that?

10. How many galaxies like our own would it take laid edge-to-edge to reach the nearest galaxy? (*Hint: See Problem 9.*)