Chapter 5 Problem I (+1) Name _____

1. In your own words, state the main ideas of Dalton's atomic theory.

2. Characterize the size of an atom.

3. Democritus and Dalton both proposed that matters consist of atoms. How did their approach to reaching that conclusion differ?

4. What are the charges and relative masses of:
   a) proton = relative mass =

   b) electron = relative mass =

   c) neutron = relative mass =

5. Describe the basic structure of an atom.

33. With which of these statements would John Dalton have agreed in the early 1800s?
    a) Atoms are the smallest particles of matter.
    b) The mass of an iron atom is different from the mass of copper atom.
    c) Every atom of silver is identical to every other atom of silver.
    d) A compound is composed of atoms of two or more different elements.

34. What experimental evidence did Thomas have for each statement?
    a) Electrons have a negative charge.

    b) Atoms of all elements contain electron.

35. Would you expect two electrons to attract or repel?

36. How did the results of Rutherford's gold foil experiment differ from his expectations?

37. What is the charge, positive or negative, of the nucleus of every atom?