Subatomic Heavyweights HW

Read and outline (Cornell style) **Section 4.3** in your chemistry textbook. Then answer the following assessment questions:

1. Which subatomic particle identifies an atom as that of a particular element? How is this particle related to the atom's atomic number?
2. What is an isotope? Give an example of an element with isotopes.
3. Explain how the existence of isotopes is related to atomic masses not being whole numbers.
4. How many electrons, protons, and neutrons are contained in each of the following atoms:
    a. Fluorine-23
    b. Molybdenum-96
    c. $^{59}_{27}Co$
    d. $^{70}_{30}Zn$
5. An isotope of iron has 26 protons and 32 neutrons. What is the mass number of this isotope? How would you write its symbol?
6. What is the atomic weight of phosphorous? What is its atomic number? Predict which isotope you would find in greatest abundance (most common) for phosphorous.