**Name:**

**Atoms and Structure Review Assignment**

**TRUE or FALSE**

1. \_\_\_\_\_Dalton's atomic theory stated all atoms of the same element are alike.
2. \_\_\_\_\_The Greek philosopher Democritus was one of the first to suggest the existence of atoms.
3. \_\_\_\_\_The word "atom" means invisible.
4. \_\_\_\_\_Dalton's atomic theory stated atoms unite in small, whole number ratios to form compounds.
5. \_\_\_\_\_Aristotle supported the idea of the atom.
6. \_\_\_\_\_From the "gold-foil" experiment it was concluded that the atom is mostly empty space.

**Fill in the blank**

1. Atoms of the same element have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ protons.
2. #Protons + #Neutrons = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. #Protons = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. According to John Dalton, all elements were made of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. J.J. Thompson discovered the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ charge.
6. Bohr’s Model is also often referred to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ model, because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ circle the nucleus.

**Short answer (1-3 sentences, must be complete sentences):**

1. Why and how did atomic theory change from Dalton’s to the Modern Atomic Theory?
2. Compare the three subatomic particles (electrons, protons, neutrons) in terms of their ranking of mass, charge, and location within the atom.
3. Why is the AMU used?
4. How did Rutherford know that an atom was mostly empty space and the nucleus was positively charged?