

Worksheet 2-1
Atomic Structure

Name _____

Period _____

1. Which statements in Dalton's atomic theory are now considered to be incorrect? Describe how the modern atomic theory differs from these statements.
2. Which subatomic particles are charged?
3. Describe the structure of a typical atom. Identify where each subatomic particle is located.
4. Compare and contrast Thomson's plum pudding atomic model with Rutherford's nuclear atomic model.
5. What caused the deflection of the alpha particles in Rutherford's gold foil experiment?
6. Which statement is consistent with the results of Rutherford's gold foil experiment?
 - a. All atoms have a positive charge.
 - b. Atoms are mostly empty space.
 - c. The nucleus of an atom contains protons and electrons.
 - d. Mass is spread uniformly throughout an atom.
7. Which subatomic particle was discovered by researchers working with a cathode ray tube?
8. Which subatomic particle identifies an atom as that of a particular element? How is this particle related to the atom's atomic number?
9. Which subatomic particles account for most of an atom's mass?

10. Complete the table for the following elements.

Element	# of protons	# of electrons	# of neutrons	Atomic #	Mass #
Manganese	25		30		
Sodium		11	12		
Bromine	35		45		
Yttrium				39	89
Arsenic		33			75
Actinium					227