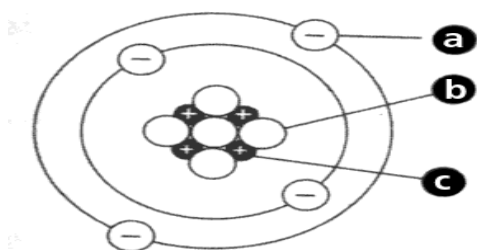


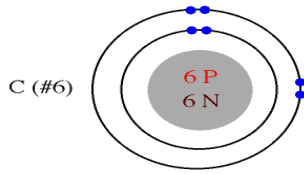
## Study Guide: Periodic Table

1. An atom of lead with 82 protons, 82 electrons, and 125 neutrons would have a mass number of: *207*
  2. Most of the elements in the periodic table are: *metals*
  3. Which of the particles in an atom has no electric charge? *Neutron*
  4. The smallest particle into which an element can be divided and still be the same substance is: *an atom*
  5. The elements to the right of the zigzag line on the periodic table are called: *metalloids*
  6. Where are electrons *likely* to be found? *Electron cloud*
  7. How many protons does an atom with an atomic number of 47 and a mass number of 108?  
*47*
  8. What did Democritus, Dalton, Thomson, Rutherford, and Bohr all have in common? *They all contributed to the development of the atomic theory*
  9. Which elements are radioactive? *Actinides - rare earth*
  10. Metals in Groups 3–12 that do not give away their electrons as easily as atoms of Groups 1 and 2 are called: *transition metals*
  11. Very reactive nonmetals are called: *halogens*
  12. Nonmetals that do not react with other elements under normal conditions: *noble gases*
  13. Metals that are so reactive that in nature they are found only combined with other elements are called: *alkali metals*
  14. Metals that have two outer-level electrons are called: *alkaline-earth metals*
  15. Compare a period and a group on the periodic table. *Period is a horizontal row of elements in the periodic table, tells how many orbitals the electrons are in. Group is a vertical column of elements and have similar chemical and physical properties, why they are also called families*
  16. Use your knowledge of the periodic table to identify for **Uranium (U)**:  

atomic number = 92	neutrons = 146	protons = 92
atomic mass = 238	electrons = 92	
  17. The sum of the protons and neutrons in an atom: *mass number*
  18. An atom that has the same number of protons as other atoms of the same element but has a different number of neutrons: *isotopes*
  19. The particle of the nucleus with no electrical charge: *neutron*
  20. Represents the number of protons in the nucleus of an atom: *atomic number*
  21. The negatively charged particle: *electron*
  22. Which of the following elements are in the same group? *B*  
 Which of the following elements are in the same period? *D*  
 A) Ca, Sc, Zr, Hg    B) Cu, Ag, Au, Rg    C) Y, Sr, Cs, H    D) C, N, O, F
  23. Are the properties of calcium, Ca, more like potassium, K, or strontium, Sr? Explain your answer. *Ca is more like Sr than K because they are in the same family and have the same chemical and physical properties*
- Label the following diagram of an atom



- a: negatively charged particle
- b: particle with no charge
- c: positively charged particle
- b and c: dense center of the atom



Draw Bohr model of carbon, show the number of protons, electrons, and neutrons

Label the information provided by the periodic table on the arrows provided.

29	← Atomic number
Cu	← Element symbol
Copper	← Element name
63.55	← Atomic mass

What does the atomic number represent? *The number of protons and electrons*  
 What does the mass number represent? *The sum of protons and neutron*

Use the following labels to show your understanding of the trends of the periodic table.

- |                  |                        |                        |               |
|------------------|------------------------|------------------------|---------------|
| A. halogen       | D. alkaline-earth      | G. 3 valence electrons | J. metalloids |
| B. rare-earth    | E. transitional metals | H. 5 valence electrons |               |
| C. alkali metals | F. noble gases         | I. 1 valence electron  |               |

