Name _____ Class _____ Date _____

SECTION 2-1 REVIEW

COMPOSITION OF MATTER

VOCABULARY REVIEW Define the following terms.

1. atom _____

2. neutron _____

3. compound _____

4. covalent bond _____

5. ion _____

MULTIPLE CHOICE Write the correct letter in the blank.

_____ 1. The atomic number of carbon is 6. Therefore, the number of protons in a carbon atom equals

a. 3. **b.** 6. **c.** 7. **d.** 12.

_____ 2. One of the kinds of particles found in the nucleus of an atom is the

a. proton. **b.** electron. **c.** ion. **d.** boron.

_____ 3. The maximum number of electrons that can be held in an atom's second energy level is

a. 2. **b.** 4. **c.** 6. **d.** 8.

_____ 4. Of the following elements, the one that is most likely to form ionic bonds is

a. hydrogen. **b.** carbon. **c.** sodium. **d.** oxygen.

_____ 5. An example of a compound is

a. water. **b.** hydrogen gas. **c.** oxygen gas. **d.** chloride ion.

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SHORT ANSWER **Answer the questions in the space provided.**

1. What is the difference between mass and weight? _____

2. Identify the elements and the number of atoms of each element in each of the following compounds:

   BO_2 _____ KCl _____

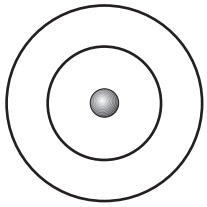
   $C_6H_{12}O_6$ _____ NH_3 _____

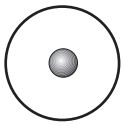
3. How many pairs of electrons do the two oxygen atoms in an oxygen molecule share with each other? Explain your answer. _____

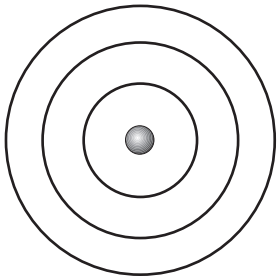
4. **Critical Thinking** The atomic number of argon is 18. Will argon tend to form bonds with other elements? Explain your answer. _____

STRUCTURES AND FUNCTIONS **Label each atom in the spaces provided, and complete the models by drawing the correct number of electrons at each energy level.**

The diagrams below represent incomplete models of the atoms helium (atomic number 2), carbon (atomic number 6), and sulfur (atomic number 16). Note: The third energy level can contain up to eight electrons.







a _____ b _____ c _____

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