**BALANCING CHEMICAL EQUATIONS WORKSHEET**

**Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Class:** \_\_\_\_\_\_\_\_\_\_ **Date:** \_\_\_\_\_\_\_\_\_\_\_\_

This assessment addresses the following State of Tennessee 8th grade science

Standards:

**SPI 0807.9.10** Identify the reactants and products of a chemical reaction.

**SPI 0807.9.11** Recognize that in a chemical reaction, the mass of the reactants is equal

To the mass of the products (Law of Conservation of Mass).

For the following:

**1.** Draw a circle around each subscript.

**2.** Draw a square around each coefficient.

 **a.** H2O **b.** 5Cl2 **c.** 2Mg **d.** 3H2O2

For the following

**1.** List the chemical symbols of each element.

**2.** Give the number of atoms of each element.

**a.** HCl **b.** CO2 **c.** Na2SO4

**Balance the following chemical equations.**

**1.** \_\_\_\_\_\_\_ Cu2O + \_\_\_\_\_\_\_ C  \_\_\_\_\_\_\_ Cu + \_\_\_\_\_\_\_ CO2

**2.** \_\_\_\_\_\_\_ H2O2  \_\_\_\_\_\_\_H2O + \_\_\_\_\_\_\_O2

**3.** \_\_\_\_\_\_\_ Al + \_\_\_\_\_\_\_Fe3N2  \_\_\_\_\_\_\_ AlN + \_\_\_\_\_\_\_ Fe

**4.** \_\_\_\_\_\_\_Ag2S  \_\_\_\_\_\_\_Ag + \_\_\_\_\_\_\_ S8

**5.** \_\_\_\_\_\_\_ ZnS + \_\_\_\_\_\_\_AlP  \_\_\_\_\_\_\_Zn3P2 + \_\_\_\_\_\_\_Al2S3

**6.** \_\_\_\_\_\_\_ Fe (OH) 3  \_\_\_\_\_\_\_ Fe2O3 + \_\_\_\_\_\_\_H2O

**Given the two chemical equations, circle the one that is balanced.**

**7. a.** 2Na + Cl2  2NaCl

 **b.** 2Na + 2Cl2  2NaCl

**8. a.** C3H8 + 5O2  3CO2 + 4H2O

 **b.** 2C3H8 + 5O2  3CO2 + 8H2O

**9.** **a.** 2NH3 + 5O2  2NO + 3H2O

 **b.** 4NH3 + 5O2  4NO + 6H2O

**10.** **a.** Y (NO3)2 + GaPO4  YPO4 + Ga (NO3)2

 **b.** 2Y (NO3)2 + 2GaPO4  2YPO4 + Ga (NO3)2