

### Chemical Equation Worksheet #1

Balance the following equations as indicated.

1.  $\_\_ \text{Mg} + \_\_ \text{N}_2 \rightarrow \_\_ \text{Mg}_3\text{N}_2$
2.  $\_\_ \text{SO}_2 + \_\_ \text{P}_2\text{O}_5 \rightarrow \_\_ \text{S}_2\text{O}_5 + \_\_ \text{P}_2\text{O}_4$
3.  $\_\_ \text{C}_2\text{H}_2 + \_\_ \text{O}_2 \rightarrow \_\_ \text{CO}_2 + \_\_ \text{H}_2\text{O}$
4.  $\_\_ \text{Al}_2(\text{SO}_4)_3 + \_\_ \text{FeS}_2 \rightarrow \_\_ \text{Fe}_2(\text{SO}_4)_3 + \_\_ \text{Al}_2\text{S}_3$
5.  $\_\_ \text{Fe}(\text{CO})_5 + \_\_ \text{H}_2 \rightarrow \_\_ \text{CO}_2 + \_\_ \text{Fe} + \_\_ \text{H}_2\text{O}$
6.  $\_\_ \text{C}_2\text{H}_6 + \_\_ \text{O}_2 \rightarrow \_\_ \text{CO}_2 + \_\_ \text{H}_2\text{O}$
7.  $\_\_ \text{C}_2\text{H}_2 + \_\_ \text{O}_2 \rightarrow \_\_ \text{CO}_2 + \_\_ \text{H}_2\text{O}$
8.  $\_\_ \text{AlPO}_4 + \_\_ \text{H}_2 \rightarrow \_\_ \text{Al}(\text{OH})_3 + \_\_ \text{P} + \_\_ \text{H}_2\text{O}$
9.  $\_\_ \text{P}_4(\text{SO}_4)_2 + \_\_ \text{H}_2 \rightarrow \_\_ \text{SO}_2 + \_\_ \text{P}_4 + \_\_ \text{H}_2\text{O}$
10.  $\_\_ \text{Mg}_3(\text{PO}_4)_2 + \_\_ \text{HBr} \rightarrow \_\_ \text{MgBr}_2 + \_\_ \text{H}_2\text{O} + \_\_ \text{P}_2\text{O}_5$

11. Examine the following chemical equation:



- a) How many carbon atoms are represented on each side of the equation? \_\_\_\_\_
- b) What is the coefficient for oxygen in this equation? \_\_\_\_\_
- c) How many oxygen atoms are represented on each side of the equation? \_\_\_\_\_
- d) How many hydrogen atoms are represented on each side of the equation? \_\_\_\_\_
- e) In this reaction, which molecules are the reactants? \_\_\_\_\_
- f) In this reaction, which molecules are the products? \_\_\_\_\_

12. Describe what is meant when we say "balance an equation".