

Chemical Equation Worksheet #1

Balance the following equations as indicated.

1. $__ \text{Mg} + __ \text{N}_2 \rightarrow __ \text{Mg}_3\text{N}_2$
2. $__ \text{SiO}_2 + __ \text{PbSi}_2 \rightarrow __ \text{Si}_2\text{Si}_2 + __ \text{PbSi}_4$
3. $__ \text{C}_2\text{H}_2 + __ \text{O}_2 \rightarrow __ \text{CO}_2 + __ \text{H}_2\text{O}$
4. $__ \text{Al}_2(\text{SO}_4)_3 + __ \text{FeSi}_2 \rightarrow __ \text{Fe}_2(\text{SO}_4)_3 + __ \text{AlSi}_2$
5. $__ \text{Fe}(\text{CO})_5 + __ \text{H}_2 \rightarrow __ \text{CO}_2 + __ \text{Fe} + __ \text{H}_2\text{O}$
6. $__ \text{C}_4\text{H}_8 + __ \text{O}_2 \rightarrow __ \text{CO}_2 + __ \text{H}_2\text{O}$
7. $__ \text{C}_2\text{H}_6 + __ \text{O}_2 \rightarrow __ \text{CO}_2 + __ \text{H}_2\text{O}$
8. $__ \text{AlPO}_4 + __ \text{H}_2 \rightarrow __ \text{Al}(\text{OH})_3 + __ \text{P} + __ \text{H}_2\text{O}$
9. $__ \text{Pb}(\text{SO}_4)_2 + __ \text{H}_2 \rightarrow __ \text{SO}_2 + __ \text{Pb} + __ \text{H}_2\text{O}$
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".