

Chemical Equations
Worksheet I

Name _____

1. Define "reactant": _____

2. Define "product": _____

For questions 3 & 4 use the rxn: $\text{CH}_4 + 2 \text{O}_2 \rightarrow \text{CO}_2 + 2 \text{H}_2\text{O}$

3. What are the products? $\text{CO}_2 + 2 \text{H}_2\text{O}$

4. What are the reactants? $\text{CH}_4 + 2 \text{O}_2$

For questions 5-9, list how many of each atom is represented by the coefficient and formula:

5. $3 \text{H}_2\text{O}$ 6 H 3 O

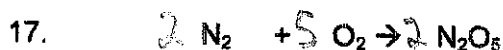
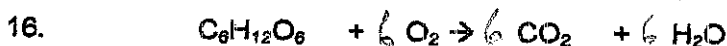
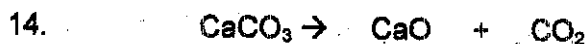
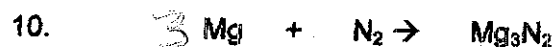
6. 2MgCO_3 2 Mg 2 C 6 O

7. $3 \text{Mg}_3\text{N}_2$ 9 Mg 6 N

8. $\text{Fe}(\text{NO}_3)_2$ 1 Fe 2 N 6 O

9. $2 \text{Fe}(\text{NO}_3)_2$ 2 Fe 4 N 12 O

Balance the following equations:



KEY

Balancing Worksheet

Name _____

Balancing Chemical Equations Coefficients - tell you the number of atoms or molecules. An equation must be balanced - it must have the same number of each atom on both sides of the equation. To balance an equation, *you are only allowed to change the coefficients.*

NEVER CHANGE SUBSCRIPTS!

Tips for Balancing Equations: (trial and error)

- If an element appears just once on each side of the equation, try balancing it first ("cross over" the coefficients)
- If the same polyatomic ion appears on both sides of the equation, treat it as a single unit.
- If an element appears by itself on one side of the equation, try balancing it last. (Use fraction if needed, then eliminate fraction.)
- A balanced equation must have the lowest possible whole number ratio of coefficients.

- Write a balanced equation for the following rxn:
Chlorine reacts with sodium bromide to produce bromine and sodium chloride.



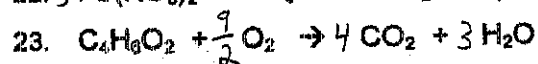
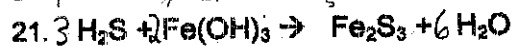
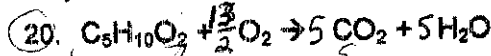
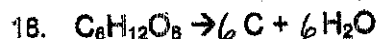
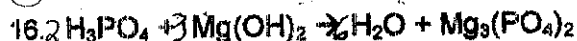
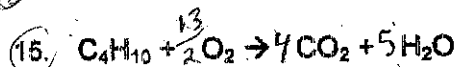
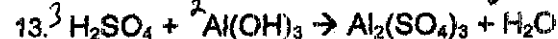
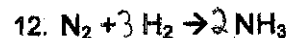
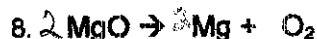
- Write a balanced equation for the following rxn:
Sodium hydroxide reacts with aluminum chloride to produce aluminum hydroxide and sodium chloride.



- Write a balanced equation for the following rxn:
Potassium reacts with sulfur to produce potassium sulfide.



Balance the following equations:



4-10 72

① 1-18
② 2-14