

## Reactions Homework Answers

- $2\text{Ag} + \text{S} \rightarrow \text{Ag}_2\text{S}$  (don't forget that Ag has a +1 oxidation # and S has a 2- oxidation #)  
Order of Coefficients: 2, 1, 1  
Type of Reaction: Combination
- $\text{C}_3\text{H}_8 + 5\text{O}_2 \rightarrow 3\text{CO}_2 + 4\text{H}_2\text{O}$   
Order of Coefficients: 1,5,3,4  
Type of Reaction: Combustion
- $4\text{Fe} + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$   
Solid iron reacts with oxygen gas to form solid iron (III) oxide.  
Type of reaction: Combination
- $2\text{HCl} + \text{Ca}(\text{OH})_2 \rightarrow 2\text{H}_2\text{O} + \text{CaCl}_2$   
Aqueous hydrochloric acid reacts with solid calcium hydroxide to form liquid water and aqueous calcium chloride.  
Type of reaction: Acid/Base Neutralization

## Word Equation Practice Answers

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|---|-----------|-----------------------|
| 1. $\text{Mg} + \text{S} \rightarrow \text{MgS}$                                      | (1,1,1)   | Decomposition         |
| 2. $\text{O}_2 + 2\text{Cu} \rightarrow 2\text{CuO}$                                  | (1,2,2)   | Combination/Synthesis |
| 3. $2\text{Al} + 2\text{CuCl}_2 \rightarrow 3\text{Cu} + 2\text{AlCl}_3$              | (2,3,3,2) | Single Replacement    |
| 4. $6\text{N}_2\text{O}_5 \rightarrow 4\text{N}_3\text{O}_5 + 5\text{O}_2$            | (6,4,5)   | Decomposition         |
| 5. $\text{Mg}_3\text{N}_2 \rightarrow 3\text{Mg} + \text{N}_2$                        | (1,3,1)   | Decomposition         |
| 6. $4\text{Al} + 3\text{O}_2 \rightarrow 2\text{Al}_2\text{O}_3$                      | (4,3,2)   | Combination/Synthesis |
| 7. $2\text{NH}_3 \rightarrow \text{N}_2 + 3\text{H}_2$                                | (2,1,3)   | Decomposition         |
| 8. $3\text{H}_2 + \text{Fe}_2\text{O}_3 \rightarrow 3\text{H}_2\text{O} + 2\text{Fe}$ | (3,1,3,2) | Single Replacement    |