

Unit 5, Video 4: Synthesis and Decomposition Reactions

Synthesis Reactions

1. Fill in the blank: Synthesis reactions form when two or more reactants combine to form _____ product.
2. True or False: Charges should be considered when determining the subscripts for each compound.
3. True or False: The subscripts for each element must match for the reactants and the products.

Decomposition Reactions

4. The chart below helps predict the products of decomposition reactions. The "M" in the chart stands for metal while the "NM" stands for nonmetal. Fill in the blanks in the chart.

Metal carbonates:



Metal hydrogen carbonates:



Metal hydroxides:



Metal chlorates:



Acids with oxygen:



5. What type of reactant will decompose to form a metal oxide plus water?
6. In the decomposition of lithium carbonate, the products would be lithium oxide plus _____.
7. In the decomposition of sodium hydroxide, the products would be sodium oxide plus _____.
8. True or False: Subscripts and coefficients should always be confirmed.