

Chemical Reaction Practice Problems

Name: _____

- Which of the following is true regarding the law of conservation of mass?
 - It dictates that the number of molecules on each side of a chemical equation must be the same.
 - It dictates that the number of atoms of each element must be the same on both sides of a chemical equation.
 - It states that the mass of the reactants must remain constant in order for a chemical reaction to proceed.
 - It does not apply to chemical reactions.
- Which of the following may indicate that a chemical reaction has occurred?
 - release of energy as light
 - a color change
 - gas bubble formation
 - All of the above
- Which of the following is a product in the reaction described by the word equation below?
iron + copper(II) sulfate \rightarrow iron(II) sulfate + copper
 - iron(II) sulfate
 - copper
 - iron
 - Both (a) and (b)

What are the coefficients to balance the equations below.

- ____ P_4 + ____ $\text{O}_2 \rightarrow$ ____ P_2O_3
- ____ CF_4 + ____ $\text{Br}_2 \rightarrow$ ____ CBr_4 + ____ F_2
- ____ N_2 + ____ $\text{H}_2 \rightarrow$ ____ NH_3
- ____ $\text{Pb}(\text{OH})_2$ + ____ $\text{HCl} \rightarrow$ ____ H_2O + ____ PbCl_2
- ____ NaOH + ____ $\text{Cu}(\text{NO}_3)_2 \rightarrow$ ____ $\text{Cu}(\text{OH})_2$ + ____ NaNO_3