

Semester 1 Final Review Quiz: Unit 5

- Which of the following is a single replacement reaction?
 - $3\text{Ca}(\text{OH})_2 + \text{Al}_2(\text{SO}_4)_3 \rightarrow 3\text{CaSO}_4 + 2\text{Al}(\text{OH})_3$
 - $\text{C}_2\text{H}_4 + 3\text{O}_2 \rightarrow 2\text{CO}_2 + 2\text{H}_2\text{O}$
 - $2\text{PbSO}_4 \rightarrow 2\text{PbSO}_3 + \text{O}_2$
 - $2\text{NH}_3 + 3\text{I}_2 \rightarrow \text{N}_2\text{I}_6 + 6\text{H}_2$**
- Which of the following is the CORRECT way to write nitrogen when it is alone in a chemical reaction?
 - N
 - N^{-3}
 - N^{+2}
 - N_2**
- What are the coefficients for the following chemical equation when it is balanced?

$$\underline{\hspace{1cm}} \text{NaBr} + \underline{\hspace{1cm}} \text{H}_3\text{PO}_4 \rightarrow \underline{\hspace{1cm}} \text{Na}_3\text{PO}_4 + \underline{\hspace{1cm}} \text{HBr}$$
 - 3, 1, 1, 3**
 - 3, 1, 1, 1
 - 6, 2, 2, 6
 - 3, 2, 2, 3
- Which of the following elements would potassium not be able to replace?
 - Cu
 - Cs
 - Li**
 - Mg
- A chemical equation is balanced when the _____.
 - coefficients of the reactants equal the coefficients of the products
 - same number of each kind of atom appears in the reactants and in the products**
 - products and reactants are the same chemicals
 - subscripts of the reactants equal the subscripts of the product
- When the following equation is balanced, what are the coefficients? $\text{C}_2\text{H}_6\text{O} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
 - 1,2,2,3
 - 2,3,2,3
 - 3,3,2,3
 - 1,3,2,3**
- When the following reaction is completed, one of the products will be _____.

$$\text{Zn (s)} + \text{CuSO}_4 \text{ (aq)} \rightarrow$$
 - ZnCuSO_4
 - ZnCu
 - ZnSO_4**
 - Zn_2SO_4
- When the following reaction is completed, one of the products will be _____.

$$\text{CH}_4 \text{ (g)} + \text{O}_2 \text{ (g)} \rightarrow$$
 - CH_4O_2
 - H_2
 - C
 - CO_2**
- What is the balanced equation when aluminum reacts with copper (II) sulfate?
 - $\text{Al} + \text{Cu}_2\text{S} \rightarrow \text{Al}_2\text{S} + \text{Cu}$
 - $2\text{Al} + 3\text{CuSO}_4 \rightarrow \text{Al}_2(\text{SO}_4)_3 + 3\text{Cu}$**
 - $\text{Al} + \text{CuSO}_4 \rightarrow \text{AlSO}_4 + \text{Cu}$
 - $2\text{Al} + \text{Cu}_2\text{SO}_4 \rightarrow \text{Al}_2\text{SO}_4 + 2\text{Cu}$
- Which observation does **not** indicate that a chemical reaction has occurred?
 - formation of a precipitate
 - production of a gas
 - evolution of energy
 - change in total mass of substances**
- An insoluble solid produced by a chemical reaction in a solution is called _____.
 - A precipitate**
 - A reactant
 - A molecule
 - The mass of the product
- An element in the activity series can replace any element _____.
 - in the periodic table
 - below it on the list**
 - above it on the list
 - in its group
- In which of the following reactions would a precipitate form?
 - $\text{KNO}_3 + \text{NaNO}_3 \rightarrow$
 - $\text{Cu}(\text{NO}_3)_2 + \text{NaOH} \rightarrow$**
 - $\text{NaCl} + \text{KNO}_3 \rightarrow$
 - $\text{CuSO}_4 + \text{KCl} \rightarrow$