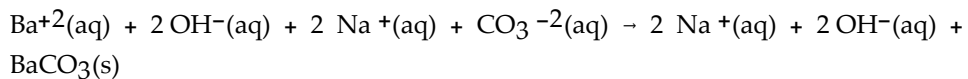


Quiz: (Quiz #2 of Chapter 4)

Name \_\_\_\_\_ Show all of your work, including units.

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

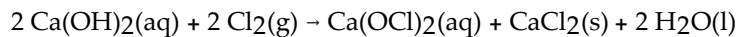
- 1) Circle the spectator ions in the following reaction **and** write its net ionic equation below. 1) \_\_\_\_\_



- 2) There are \_\_\_\_\_ mol of bromide ions in 0.900 L of a 0.500M solution of  $\text{AlBr}_3$ . 2) \_\_\_\_\_

- 3) Calculate the concentration (M) of sodium ions in a solution made by diluting 40.0 mL of a 0.474 M solution of sodium sulfide to a total volume of 300 mL. 3) \_\_\_\_\_

- 4) How many grams of  $\text{CaCl}_2$  are formed when 15.00 mL of 0.00237 M  $\text{Ca}(\text{OH})_2$  reacts with excess  $\text{Cl}_2$  gas? 4) \_\_\_\_\_



A) 0.0507 g

B) 0.00197 g

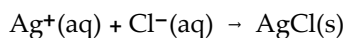
- 5) Which of the compounds  $\text{H}_2\text{C}_2\text{O}_4$ ,  $\text{Ca}(\text{OH})_2$ ,  $\text{KOH}$ , and  $\text{HI}$ , behave as bases when they are dissolved in water? 5) \_\_\_\_\_
- A) only  $\text{HI}$  B)  $\text{Ca}(\text{OH})_2$  and  $\text{KOH}$   
C)  $\text{H}_2\text{C}_2\text{O}_4$  and  $\text{HI}$  D) only  $\text{KOH}$

- 6) Identify  $\text{LiBr}$ . 6) \_\_\_\_\_
- A) strong acid  
B) weak acid  
C) strong electrolyte  
D) weak electrolyte  
E) nonelectrolyte

- 7) How many of the following compounds are **soluble** in water? 7) \_\_\_\_\_
- $\text{Cu}(\text{OH})_2$     $\text{NaNO}_3$     $\text{NH}_4\text{Cl}$     $\text{Li}_2\text{S}$
- A) 3                      B) 1                      C) 4                      D) 2                      E) 0

- 8) The mixing of which pair of reactants will result in a precipitation reaction? 8) \_\_\_\_\_
- A)  $\text{K}_2\text{SO}_4(\text{aq}) + \text{Hg}_2(\text{NO}_3)_2(\text{aq})$                       B)  $\text{HCl}(\text{aq}) + \text{Ca}(\text{OH})_2(\text{aq})$   
C)  $\text{NaNO}_3(\text{aq}) + \text{NH}_4\text{Cl}(\text{aq})$                       D)  $\text{CsI}(\text{aq}) + \text{NaOH}(\text{aq})$

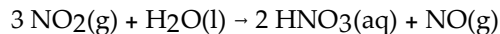
- 9) **Silver ions** can be precipitated from aqueous solutions by the addition of aqueous chloride: 9) \_\_\_\_\_



Silver chloride is virtually insoluble in water so that the reaction appears to go to completion. How many grams of solid  $\text{NaCl}$  must be added to 25.0 mL of 0.366 M  $\text{AgNO}_3$  solution to completely precipitate the silver?

- A)  $6.39 \times 10^3$  g                      B) 0.535 g

- 10) If the percent yield for the following reaction is 75.0%, and 45.0 g of  $\text{NO}_2$  are consumed in the reaction, how many grams of nitric acid,  $\text{HNO}_3(\text{aq})$  are produced? 10) \_\_\_\_\_



- A) 30.8 g                      B) 54.8 g

## Answer Key

Testname: QUIZ 4.4-4.6

- 1)  $\text{Na}^+$  and  $\text{OH}^-$
- 2) 1.35
- 3) 0.126
- 4) B
- 5) B
- 6) C
- 7) A
- 8) A
- 9) B
- 10) A