## Section 4C Review

- 1) What is a precipitate? What is a salt?
- 2) What is a reference solution? How is it used?
- 3) What is a confirming test?
- 4) What is a net ionic equation?
- 5) Using your solubility rules, determine whether the following substances are soluble or insoluble in water.

Name	Soluble or Insoluble?	Name	Soluble or Insoluble?
potassium sulfate		lithium carbonate	
calcium phosphate		ammonium acetate	
iron (III) hydroxide		magnesium sulfide	

- 6) Name and write the formula of the precipitate formed in the reaction between magnesium chloride and potassium carbonate.
- 7) Identify the solid produced by the following reaction. Write a net ionic equation for the reaction. If the combination does not form a precipitate, write NR.

a) \_\_\_\_ Na
$$_2$$
S (aq) + \_\_\_\_CaCl $_2$  (aq)  $ightarrow$ 

b) 
$$\underline{\hspace{1cm}}$$
 Mg(NO<sub>3</sub>)<sub>2</sub> (aq) +  $\underline{\hspace{1cm}}$  Na<sub>3</sub>PO<sub>4</sub> (aq)  $\rightarrow$ 

c) \_\_\_ SnCl2 (aq) + \_\_\_ KNO3 (aq) 
$$\rightarrow$$

	8)	When acids	and bases	react together	what is	formed?
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- 9) Compare and contrast hydrogen ions and hydroxide ions.
- 10) Draw a diagram of the pH scale, including important numbers and ranges.
- 11) Explain what the numbers of the pH scale mean. What is the difference between a pH of 4 and a pH of 5? A pH of 4 and a pH of 7?
- 12) What is a buffer and what does it do?

13) Identify the following as acids, bases or neutral solutions.

Formula	Acid, Base or Neutral?	Formula?	Acid, Base or Neutral?
HBr		KCI	
Fe(OH) <sub>2</sub>		H <sub>2</sub> SO <sub>4</sub>	
Ba(NO <sub>3</sub> ) <sub>2</sub>		NH₄OH	

14) Complete and balance the following neutralization reactions.

a) \_\_\_ HCl + \_\_\_ Ca(OH)
$$_2$$
  $\rightarrow$ 

b) \_\_\_\_ NaOH + \_\_\_\_ 
$$H_3PO_4 \rightarrow$$

c) \_\_\_ HF + \_\_\_ Al(OH)<sub>3</sub> 
$$\rightarrow$$

15) We used two indicators in the acid/base unit. Universal indicator and phenolphthalein indicator. Tell the colors of these indicators in acid, base and neutral solutions.