Acids and Bases Test Honors (Practice) ***Name*** _____

Record your multiple choice answers here.

Question	Answer	Question	Answer	Question	Answer
1		8		15	
2		9		16	
3		10		17	
4		11			
5		12			
6		13			
7		14			

1. Determine the pH of the following:
   A. 0.25 M HBr = _____

   B. 0.003 M HCl = _____

   C. 0.00125 M NaOH = _____

2. . A basic solution is prepared by dissolving 7.55 g of sodium hydroxide in 850.0 mL of water. What is the pH of the solution?

3. A 35.0 mL volume of $Ca(OH)_2$ is titrated with 38.0 mL of 0.10 M HCl. What is the molarity of the calcium hydroxide in this solution?

4. If 72.1 mL of a 0.543 M H_2SO_4 solution completely titrates 45.0 mL of KOH solution, what is the molarity of the KOH?

5. Complete the following chart.

Salt	Parent Acid	Acid Strength	Parent Base	Base Strength	Type of Salt
Na_2CO_3					
NH_4Br					
$Al(NO_3)_3$					

6. Write a balanced chemical equation for each. Identify the acid, base, and salt for each equation.

A. $HNO_3 + Ca(OH)_2 \rightarrow$

B. $Al(OH)_3 + H_2SO_4 \rightarrow$

7. A solution of NaOH is prepared with 9.2 g of NaOH in 600 mL of water. Calculate the molarity of the solution and determine the pH

M = _____ pH = _____

8. Complete the table.

$[H^+]$	pH	pOH
6.54×10^{-5}		
	7	
9.5×10^{-3}		

9. Complete the table.

[H+]	[OH-]
6.4×10^{-3}	
	9.8×10^{-1}

Extra Credit! Given that a reaction occurs using 30 g of NH_4NO_3 and 50 g of Na_3PO_4:

A. Write a balanced equation (3)
B. Determine the limiting reagent (5).
C. Determine the amount of excess reagent left over (5).