**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Acids & Bases Review**

***Part I: Vocab/Theory***

*Match the following definitions to the words on the right*

1. This type of substance usually has OH at the end of its formula
2. When this is reached during titration, there is equal amount of acid as base
3. This is how bases taste
4. This is how bases feel
5. This is how acids taste
6. This is what color bases turn all colors of litmus paper
7. This is what color acids turn all colors of litmus paper
8. An acid has a pH of
9. A base has a pH of
10. A neutral substance has a pH of
11. This process allows you to find the concentration of an unknown solution
12. This is something that changes color in acids or bases
13. An acid is known as a proton
14. A base is known as a proton
15. This type of substance usually has an H at the beginning of its chemical formula
16. Acid
17. Base
18. Sour
19. Bitter
20. Slippery
21. Red
22. Blue
23. Equivalence point
24. Titration
25. Donor
26. Acceptor
27. Below 7
28. Above 7
29. 7
30. indicator

*Answer the following questions:*

1. What are the three definitions for acids?
2. What are the three definitions for a base?
3. What is the difference between strong and weak?
4. Label the following as weak acid, strong acid, weak base, or strong base



1. Can something be weak and concentrated? Explain your answer?
2. Can something be strong and dilute? Explain your answer?
3. What is pH?
4. What are always the reactants of a neutralization reaction?
5. What are always the products of a neutralization reaction?
6. Will the following be acidic, basic, or neutral when reacted:
	1. Strong Acid + Strong Base: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Strong Acid + Weak Base: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Weak Acid + Strong Base: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Label the following as: strong base + strong acid, weak acid + strong base, strong acid + weak base.



1. How does soap work?
2. What is ammonia found in?
3. Why shouldn’t you use shampoo or other products that are too acidic on your face or skin?
4. How do antacids work?

***Part II: pH Calculations***

1. Which is the most acidic: 1,4,8,10
2. Which is the most basic: 1, 4, 8, 10
3. How much more acid is a pH of 3 than 6?
4. How much more basic is a pH of 10 than 9?
5. What is the pH of something with an H+ concentration of 0.0000001 M
6. What is the pH of something with an H+ ­­concentration of 0.001 M
7. What is the pH of something with an H+concentration of 1.0 M
8. What is the pH of something with an H+concentration of 1.0 x 10-5 M
9. What is the pH of something with an H+concentration of 1.0 x 10-8
10. What is the pH of something if the solution is made with 0.00004 moles and 4 L of solution
11. What is the pH of something if the solution is made with 0.001 moles and .1 L of solution
12. What is the pH of something if the solution is made with 0.006 moles and .06 L of solution
13. Find the H+ concentration of a solution with pH of 10
14. Find the H+ concentration of a solution with pH of 4
15. Find the H+ concentration of a solution with pH of0

*Neutralization*

1. True or False: Neutralization always means pH 7?
2. Predict the products:
	1. HNO3 + K(OH) → \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. HCl + Na(OH) → \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. HBr + Li(OH) → \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. H2SO4 + Mg(OH)2 → \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_