**Acids and Bases People Search:** Find a classmate who can answer one of the questions below. Discuss the answer and reasoning with that person. If you agree with their answer, have them print their **name** (NOT THE ANSWER) on the line in the question box. Rules: You may NOT sign any of your own boxes. In addition, any one classmate may only sign a maximum of \_\_\_\_ boxes on your paper.

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| 1. Which type of negative ion do bases produce according to Arrhenius?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 2. If 50. mL of 0.50 M KOH solution is used to neutralize 125.mL of H2SO4, what is the concentration of the H2SO4?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 3. How do the [H+] and  [OH-] compare in a neutral solution (pH=7)?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 4. Find conjugate pairs and label acids and bases:  HCl + H2O -> Cl- + H3O+  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 5. How many times more acidic is a solution with a pH of 2 than a solution with a pH of 4?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 6. What types of particles are produced by electrolytes that allow them to conduct electricity?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 7. Determine the approximate pH of a solution that turns methyl orange yellow and litmus red.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 8. List the general formula for a neutralization reaction.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 9. Identify the laboratory process in which a solution of known concentration is used to determine the unknown concentration of another solution. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 10. Give an example of a solution that will turn litmus red.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 11. Describe how the [H+] changes when pH decreases (ex. going from pH 10 to 5)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 12. If pH of a solution is 2, what is the [H3O+]?   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 13. If the [H3O+] in a solution is 1 x 10-11, determine the pH and classify as acidic or basic.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 14. Which type of positive ion do acids produce according to Arrhenius?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 15. Determine the formula of the salt that is produced when H2SO4 and KOH react.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 16. What color would bromthymol blue appear in a solution of pH 6.5?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 17. How does the Bronsted-Lowry theory distinguish acids from bases?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 18. Give an example of a solution that produces OH- as the only negative ion in solution.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 19. Compare the moles of H+ ions to the moles of OH- ions when solutions have been exactly neutralized by titration.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 20. Based on Table J, which substances will not react with acids?   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 21. Find the electrolytes:  -CH3OH  -NaCl  -H2O  -H2SO4 \_\_\_\_\_\_\_\_\_\_  -NaOH | 22. Define “amphoteric substance.”   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 23. When HCl reacts with Mg, what products are created?   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 24. Why wouldn’t bromcresol green be an appropriate indicator to differentiate between solutions of pH 6 and 8? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 25. If 20. mL of 0.15M HCl is neutralized by 18. mL of KOH, what is the concentration of the KOH?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| **Question #** | **Answer** | **Explanation/Work if Math** |
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