

Worksheet #C57: Arrhenius Acids and Bases (pages 459-462, 465-466)

1. What is the formula of a hydronium ion? _____ Draw its Lewis dot structure:

2. What is the formula of a hydroxide ion? _____ Draw its Lewis dot structure:

3. Arrhenius acids are substances that produce _____ ions in a solution.

4. Arrhenius bases are substances that produce _____ ions in a solution.

5. For each of the following acids, predict the products of its reaction with water.



6. For each of the following bases, predict the products of its reaction with water



7. For each of the following indicate if the substance is a strong or weak acid or base (Hint: if it's not one of the strong acids or bases we mentioned, then it's weak).

a. HCl _____

g. NH₃ _____

b. H₂S _____

h. HC₂H₃O₂ _____

c. RbOH _____

i. HNO₃ _____

d. Ca(OH)₂ _____

j. H₂SO₄ _____

e. H₃PO₄ _____

k. HCN _____

f. NaOH _____

l. Al(OH)₃ _____

8. List all the polyprotic acids from problem # 7: _____

9. Indicators: Complete the following chart by writing the color each of these indicators turn in the presence of an acidic, basic, or neutral solution:

	Basic solution	Neutral solution	Acidic solution
Universal Indicator			
Phenolphthalein			
Purple Cabbage Juice			