Name\_\_\_\_

## Acid/Base Neutralization

A **salt** is any compound that can be derived from the neutralization of an acid and a base. The word "neutralization" is used because the acid and base properties of H+ and OH- are destroyed or neutralized. In the reaction, H+ and OH- combine to form HOH or H2O or water molecules. A neutralization reaction is a type of *double replacement* reaction. A salt is the product of an acid-base reaction and is a much broader term then common table salt as shown in the first reaction.

 $HCl + NaOH \longrightarrow NaCl + H_2O$ 

Acid + Base  $\rightarrow$  Salt + Water

- Complete the neutralizations reactions below. (balance the equations)
- Identify the salt produced in each of the reactions (circle or underline).

1)  $Mg(OH)_2 + HCl$ 

- 2) H<sub>3</sub>PO<sub>4</sub> + 3 NaOH
- 3) HNO<sub>3</sub> + KOH
- 4) HBr + Al(OH)<sub>3</sub>
- 5)  $H_3PO_4 + Ca(OH)_2$
- 6)  $H_2SO_4 + 2 NH_4OH$
- 7) NaOH +  $H_2CO_3$
- 8)  $Ca(OH)_2 + H_2CO_3$
- 9)  $H_2SO_4(aq) + 2NaOH(aq)$
- 10) HF + NaOH
- 11) HCl + Ca(OH) $_2$
- 12).  $H_2SO_4 + Mg(OH)_2$
- 13)  $HC_2H_3O_2 + LiOH$
- 14) HCl + KOH
- 15)  $H_3PO_4 + Al(OH)_3$