

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_



## Chemical Reactions Ws #5: Single Replacement Reactions

- A. Use the "Reactivity series of Metals" reference sheet or the trend in electronegativity in the Halogens to answer the following questions.
1. What would happen to a gold ring dropped into a solution of Copper nitrate?
  2. Would it be safe to mix a solution of Copper nitrate with an Iron rod?
  3. Why do you think the hydrogen from steam can replace more metals in a single replacement reaction than can the hydrogen from cold water?
  4. Which is the most reactive of the transition metals?
  5. Which family contains the most reactive metals?
  6. Which halogen is the most electronegative and therefore the most reactive?
  7. Which halogen will replace bromine in a reaction, but not fluorine?
- B. Write correct formulas for the products in these single replacement reactions. Use the "Reactivity series of Metals" reference sheet or the trend in electronegativity in the Halogens to determine if each reaction will occur. **Be sure to balance each equation.** If no reaction will occur, write "No Rxn"
1.  $\text{Al} + \text{Pb}(\text{NO}_3)_2 \rightarrow$
  2.  $\text{Cl}_2 + \text{NaI} \rightarrow$
  3.  $\text{Cr} + \text{H}_2\text{O} (\text{l}) \rightarrow$
  4.  $\text{Fe} (\text{II}) + \text{AgC}_2\text{H}_3\text{O}_2 \rightarrow$
  5.  $\text{Pb} + \text{Sn}(\text{OH})_2 \rightarrow$
  6.  $\text{Al} + \text{CuCl}_2 \rightarrow$
  7.  $\text{Br}_2 + \text{CaI}_2 \rightarrow$
  8.  $\text{Al} + \text{HCl} \rightarrow$
  9.  $\text{Mg} + \text{HCl} \rightarrow$
  10.  $\text{Ag} + \text{NaOH} \rightarrow$
  11.  $\text{Zn} + \text{H}_2\text{SO}_4 \rightarrow$
  12.  $\text{Fe} (\text{III}) + \text{CuSO}_4 \rightarrow$
  13.  $\text{Cl}_2 + \text{MgI}_2 \rightarrow$

