Chemical Reactions Practice Name: _____

1) Write a balanced chemical equation for each of the reactions below. (Hint: determine reaction types)

a) $Fe(OH)_{3\,(s)}$ --->

b) $Al_{\,(s)} + HCl_{\,(aq)}$ --->

c) $C_{25}H_{52\,(l)} + O_{2\,(g)}$ --->

d) $K_{\,(s)} + Cl_{2\,(g)}$ -->

e) Sodium carbonate is added to a solution of barium chloride.

f) Dinitrogen Pentaoxide is dissolved in water.

2) Write the complete and the net ionic equations for each.

a) $Na_2CO_{3\,(aq)} + HCl_{\,(aq)} \rightarrow NaCl_{\,(\ )} + CO_{2\,(\ )} + H_2O_{\,(\ )}$

b) $FeCl_{3\,(aq)} + Mg_{\,(s)} \rightarrow$

c) $NaCl_{\,(aq)} + Cu(NO_3)_{2\,(aq)} \rightarrow$

3) Label the following reactions as either metathesis (M) or redox (R) and then balance each reaction. If the reaction is driven by redox, identify which element is oxidized and which is reduced.

a) $Zn_{\,(s)} + O_{2\,(g)} \rightarrow ZnO_{\,(s)}$

b) $CsOH_{\,(aq)} + H_2CO_{3\,(aq)} \rightarrow H_2O_{\,(l)} + Cs_2CO_{3\,(aq)}$

c) $NaI_{\,(aq)} + Br_{2\,(l)} \rightarrow NaBr_{\,(aq)} + I_{2\,(s)}$

d) $Fe(ClO_3)_{3\,(s)} \rightarrow FeCl_{3\,(s)} + O_{2\,(g)}$