CHE101 - Extra Practice - Reactions

Date: _

Instructions: Answer the following questions. Show ALL work for problems to receive full credit. Make sure to include proper units and significant figures for all answers.

Class: _

 Complete and balance the following reactions. Indicate the state (solid, liquid or gas) of the products when known. If heat is produced as a product include it. If no reaction occurs write NR in the answer blank. The activity series from highest to lowest is: K, Ca, Na, Mg, Al, Zn, Fe, Ni, Sn, Pb, H, Cu, Ag, Hg, Au and for the halogens: F₂, Cl₂, Br₂, and I₂.

Name:

2. Complete and balance the following reactions. Indicate the state (solid, liquid or gas) of the products when known. If heat is produced as a product include it. If no reaction occurs write NR in the answer blank. The activity series from highest to lowest is: K, Ca, Na, Mg, Al, Zn, Fe, Ni, Sn, Pb, H, Cu, Ag, Hg, Au and for the halogens: F₂, Cl₂, Br₂, and I₂.

(a) HNO ₃ (aq) + K ₂ SO ₃ (aq) \longrightarrow		2(a)
(b) CaCO ₃ (s) \longrightarrow		2(b)
(c) Na(s) + H_2O(l) \longrightarrow		2(c)
(d) AlCl ₃ (aq) + Ca(NO ₃) ₂ (aq) \longrightarrow		2(d)
(e) Na ₂ S(aq) + NiCl ₂ (aq) \longrightarrow		2(e)
(f) $H_3PO_4(aq) + KOH(aq) \longrightarrow$		2(f)
(g) Hg(NO ₃) ₂ (aq) + NaI(aq) \longrightarrow		2(g)
(h) BaCl ₂ (g) + Na ₂ SO ₄ (aq) \longrightarrow		2(h)
(i)	$\longrightarrow \mathrm{H}_2\mathrm{SO}_4(\mathrm{aq})$	2(i)
(j) CaO(aq) + HCl(aq) \longrightarrow		2(j)