

Extra Practice:

- **In text book:** p111 # 104, 107, 131 (*HINT: $BaCl_2 + H_2SO_4 \rightarrow BaSO_4 + 2 HCl$*), 134, 136

104 2.4×10^{23} atoms C

107 (a) $Zn(s) + H_2SO_4(aq) \longrightarrow ZnSO_4(aq) + H_2(g)$

(b) percent purity = 64.2%

131 The formula of the hydrate is **$BaCl_2 \cdot 2H_2O$** .

134 Mg_3N_2 .

136 PbC_8H_{20} .

- **Additional Questions:**

a) $x \approx 5$

b)

1) $Ca(s) + 2 H_2O (\ell) \rightarrow Ca(OH)_2 (aq) + H_2 (g)$

2) $Ba(OH)_2 (s) + H_2SO_4 (aq) \rightarrow BaSO_4 (aq) + 2 H_2O (\ell)$

3) $Fe_2S_3 (s) + 6 HCl (g) \rightarrow 2 FeCl_3 (s) + 3 H_2S (g)$

4) $CS_2 (\ell) + 2 NH_3 (g) \rightarrow H_2S (g) + NH_4SCN (s)$

c) TY $H_2O_2 = 0.298$ g H_2O_2

? g excess reactant remaining = 0.041 g

d) **C_2H_3NS**