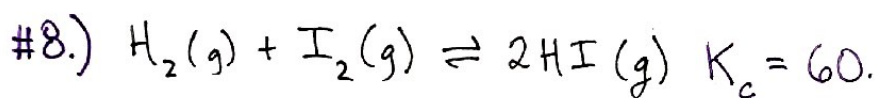




#6.)  $12.709 - 0.598 = 12.111 \text{ g AgBr}$

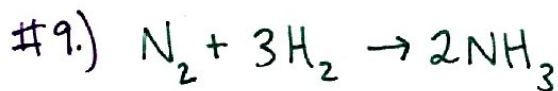
$$12.111 \text{ g AgBr} \times \frac{1 \text{ mol AgBr}}{187.77 \text{ g AgBr}} \times \frac{1 \text{ mol Br}^-}{1 \text{ mol AgBr}} \times \frac{1 \times \text{Br}_3}{3 \text{ Br}^-} = 0.0215 \text{ mol} \times \text{Br}_3$$

$$\text{Molar Mass} = \frac{\text{g}}{\text{mol}} = \frac{5.748 \text{ g}}{0.0215 \text{ mol}} = 267 \text{ g/mol} \Rightarrow \text{AlBr}_3$$



$$Q = \frac{[\text{HI}]^2}{[\text{H}_2][\text{I}_2]} = \frac{3^2}{(0.3)^2} = 100$$

$K < Q$   
 $60 < 100$  } Rxn shifts left  
 (too many products,  
 needs more reactants)



$$6.05 \text{ g H}_2 \times \frac{1 \text{ mol H}_2}{2.016 \text{ g H}_2} \times \frac{2 \text{ mol NH}_3}{3 \text{ mol H}_2} \times \frac{6.022 \times 10^{23} \text{ molec. NH}_3}{1 \text{ mol NH}_3} = 1.20 \times 10^{24} \text{ molec. NH}_3$$

#10.)  $0.585 \text{ g BaSO}_4 \times \frac{1 \text{ mol BaSO}_4}{233.39 \text{ g BaSO}_4} \times \frac{1 \text{ mol SO}_4^{2-}}{1 \text{ mol BaSO}_4} \times \frac{96.06 \text{ g SO}_4^{2-}}{1 \text{ mol SO}_4^{2-}} = 0.241 \text{ g SO}_4^{2-}$

$$\% \text{ SO}_4^{2-} = \frac{0.241 \text{ g SO}_4^{2-}}{0.5045 \text{ g sample}} \times 100 = 47.8\%$$