Problem Set 8

1. Provide all possible products for the following reactions. Be sure to include all stereoisomers and consider rearrangements.

\[ \text{HBr}\rightarrow \text{Br} \]

\[ \text{POCl}_3\rightarrow \text{OH} \]

\[ \text{Cl}_2\rightarrow \text{Cl} \]

\[ \text{Br}_2\rightarrow \text{Br} \]

\[ 1. \text{BH}_3, 2. \text{H}_2\text{O}_2/\text{OH}^- \rightarrow \text{H} \]

\[ 1. \text{Hg(OAc)}_2, \text{H}_2\text{O}, 2. \text{NaBH}_4, \text{H}_2\text{O} \rightarrow \text{OH} \]
2. Complete the following reactions. Assume excess of all reagents. Provide all possible products, and consider rearrangements.