1. Write a complete mechanism (arrow formalism) leading to all reasonable products for the following reaction. (10 points)

\[ \text{Mg, diethyl ether} \quad \xrightarrow{\text{D}_2\text{O}} \quad \text{product} \]

2. Write the major product for the following reaction. (3 points)

\[ \text{product} \]

3. Write the reactants that would lead to the following product. (3 points)

\[ \text{reactants} \]