1. (8) Fill in the missing organic reagents for the following transformations:

1. NaH → (CH₃)₂CHCH₂CH₂OCH₃
2. [Blank] → CH₂CH₂C≡CCH₂CH₃

2 NaNH₂ → CH₂CH₂C≡CCH₂CH₃

NaH → [Oxetane]

SOCl₂ → [Monochlorobenzene]
2. (8) Using the given starting material and any necessary organic or inorganic reagents, indicate how the desired compound can be synthesized.

\[
\text{Br} \quad ? \quad \text{O}
\]

3. (8) Write a complete mechanism (i.e. use curved arrows and complete Lewis structures) to show the conversion of cyclohexanol to cyclohexyl chloride with HCl.

\[
\text{OH} \quad \text{HCl} \quad \rightarrow \quad \text{Cl}
\]