Quiz 8

1) Propose a reasonable synthetic route for each of the following transformation: (4 points for each, 16 points total)

a) \[ \text{ } \rightarrow \text{ } \]

b) \[ \text{ } \rightarrow \text{ } \]

c) \[ \text{ } \rightarrow \text{ } \]
2) Draw the structure of the alkyl halide needed to prepare each of the following Wittig reagents and then determine which Wittig reagent will be the more difficult to prepare. Explain your choice. (2 points)

\[
\begin{align*}
\text{Ph} & \quad \text{Ph} \\
\text{Ph} & \quad \text{H} \\
\text{Ph} & \quad \text{Ph} \\
\text{Ph} & \quad \text{Ph}
\end{align*}
\]

3) Propose a plausible mechanism for the following transformation: (3 points)

\[
\begin{align*}
\text{HO-CH-CH-CH} & \quad \text{[H}^+\text{]} \\
\text{EtOH} & \quad \text{EtOH}
\end{align*}
\]