6A) (6 pts) Provide TWO retrosynthetic routes for the following target molecule (TM), using the **Williamson ether synthesis**. Identify the better synthetic plan, and <u>briefly explain</u> why it is better.

$$\begin{array}{ccc}
& \Longrightarrow \\
& \searrow & \bigcirc \\
& & \longrightarrow \\
& & \longrightarrow \\
\end{array}$$

6B) (18 pts) Provide the reagents necessary to transform the given starting material into the desired product. More than one step may be required. You must show your work and draw an intermediate product.