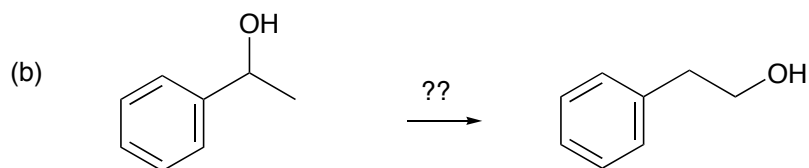
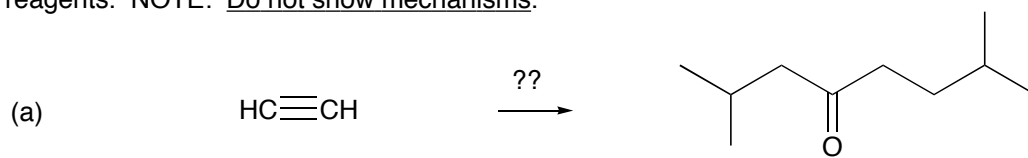


2. (20 pts) **MULTISTEP SYNTHESSES.** Provide all the steps needed to effect the following conversions, drawing structures of all intermediate compounds isolated (by distillation, chromatography, etc.). Use any needed reagents. NOTE: Do not show mechanisms.



3. (5 pts). Provide a detailed curved arrow mechanism to show how nitric and sulfuric acids react to form a nitronium ion $[\text{NO}_2]^+$.