**Assignment #6 (Due Apr 17, 2023)**

**Chem 436 – Spring 2023**

1) Fill in the box with the appropriate reagents or major products.

a)



b)



c)



d)



2) Draw the complete curved arrow pushing mechanism for the following reactions.





3) Propose a synthesis for the following reaction.



4) Starting from ANY reagent, come up with two multistep reaction sequences that must be at least five steps long. At least one reaction must be from Chapter 22 (The Chemistry of Enolate Ions, Enols, and alpha-beta-Unsaturated Carbonyl Compounds) and Chapter 23 (The Chemistry of Amines).

a)

b)