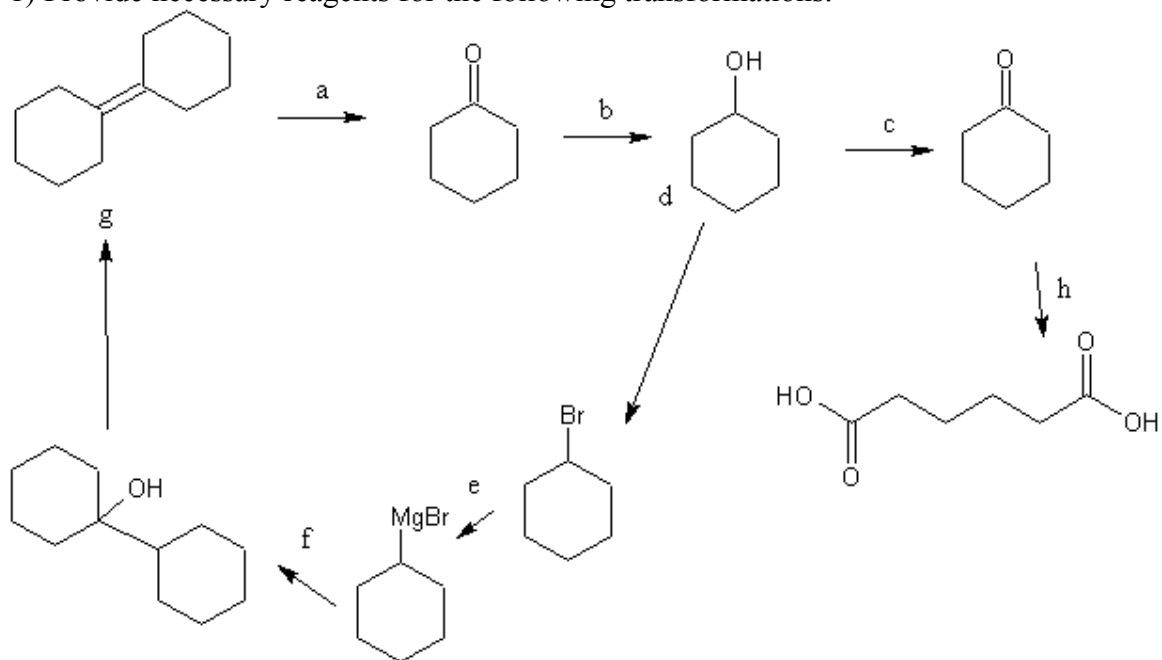
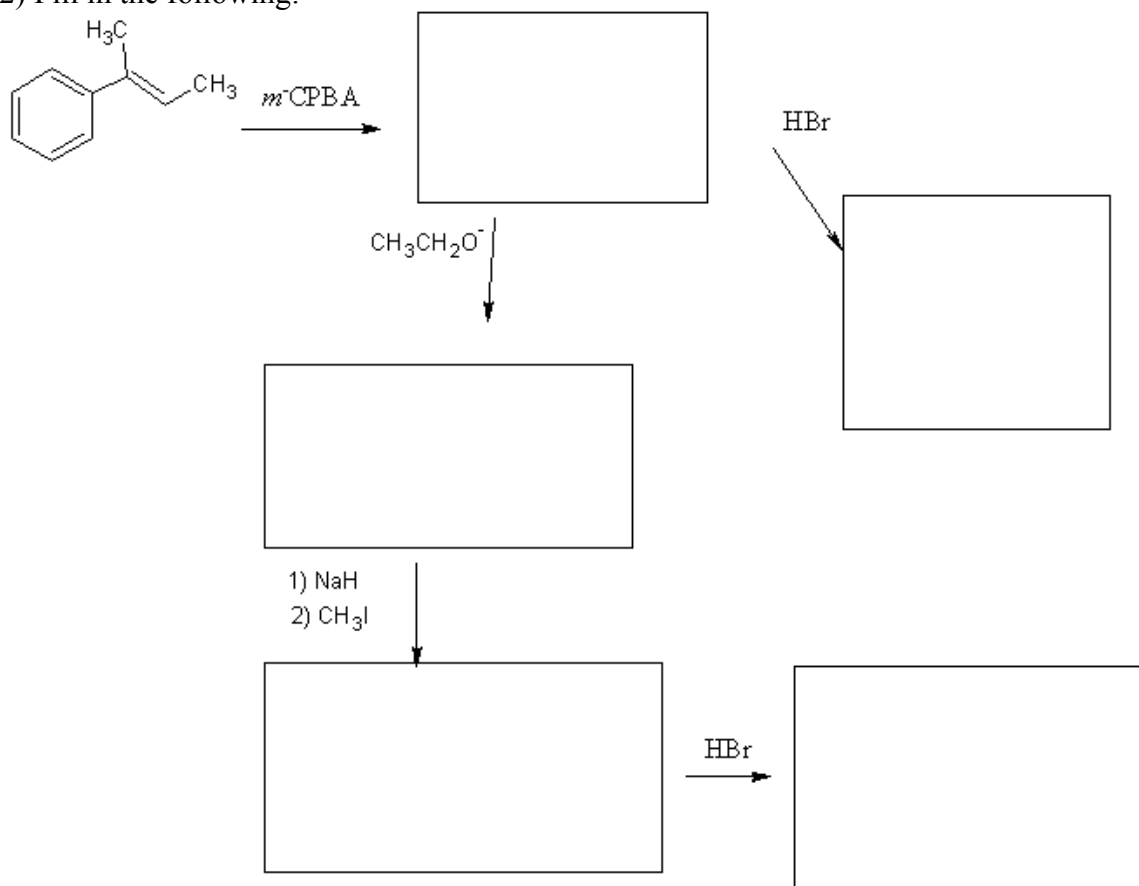


TEST II REVIEW – 8 March 2009

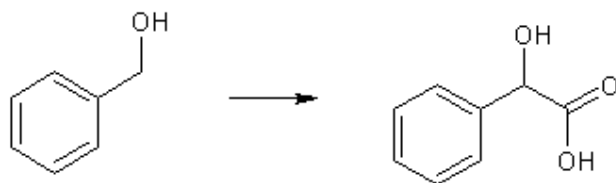
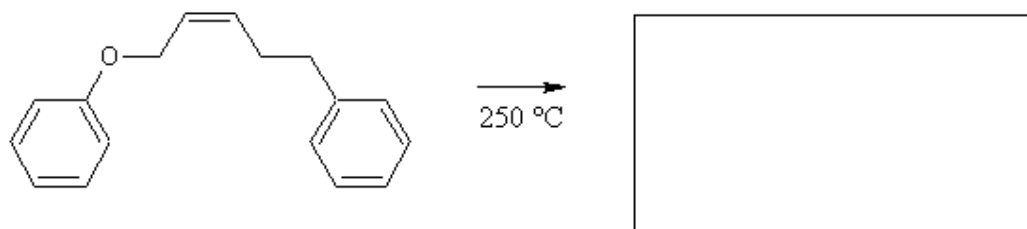
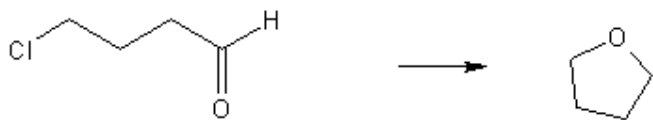
1) Provide necessary reagents for the following transformations:



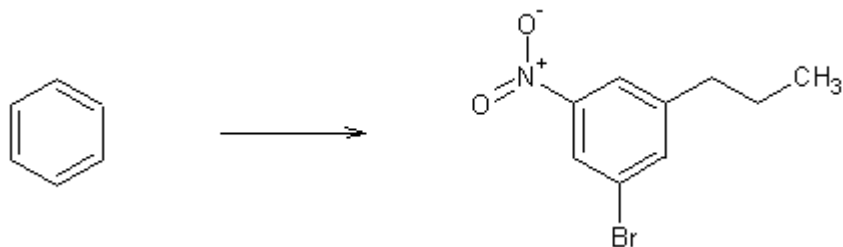
2) Fill in the following:



3) Propose methods (possibly multi-step) to form the following transformations:



4) Generate the following product from benzene:



5) **Sabotage! (Part I)** – You are just finishing your lunch when a strange man, dressed in a black cloak and top hat approaches. “I bet you 500 Canadian dollars that you can’t make this compound,” as he throws a piece of paper in front of you.

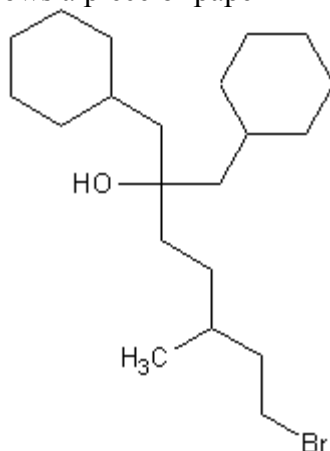
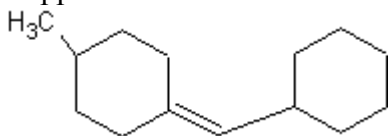


Figure 1. Image on the card given by the strange man.

“Can I use anything I want?” you inquire.

“I wouldn’t go that far...heh...heh...heh...,” he snickers. His evil smile makes a chill run down your spine. Suddenly, he vanishes into a puff of smoke! “What a crazy character,” you think to yourself. “But 500 Canadian dollars is 500 Canadian dollars.” You return to your lab. You step inside to see that EVERY BOTTLE OF ORGANIC COMPOUNDS HAS BEEN SMASHED! “There goes 500 CAD,” you say glumly. But wait! There in the corner...is that...a bottle? It is indeed! Here is the challenge:

Supplies:



, NaBH₄, PBr₃, O₃, Zn, Mg, Br₂, DIBAH, KMnO₄, CrO₃, any solvent, and generic acids and bases.

Can you make the compound? Who was that strange man? Why was your lab almost totally destroyed?

Hint: Perhaps start by breaking your only carbon source into smaller pieces.