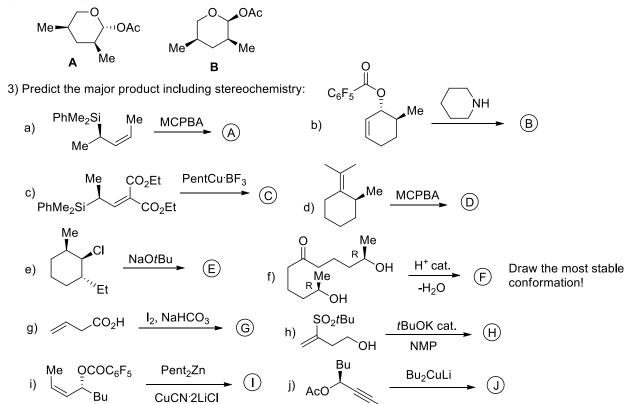
## Second Problem Set for OC I Part II (15.12.2015) Prof. Paul Knochel

1) How would you prepare the following molecules in optically pure form from simple starting materials?

2) How would you differentiate the two diastereoisomers A and B?



4) How would you prepare the following molecules?

5) Give a mechanism for the following reaction:

$$CO_2Et \xrightarrow{\begin{array}{c} 1) \text{ LDA} \\ -78 \text{ °C} \\ \hline 2) \text{ H}_3\text{O}^+ \end{array}} HO \xrightarrow{CO_2Et} CO_2Et$$