HOMEWORK ASSIGNMENT #8 ORGANIC CHEMISTRY I (20 pts)

**Due 11 November Wednesday 2015**

your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1 pt)

8.1. Practical Reaction Thinking (5 pts)

Which condition will increase the rate of the reaction given: (If both, circle **Both. I**f neither circle **None)**

HBr + t-butanol  **Using polar protic solvent** Using non-protic solvent Both None

HBr + t-butanol Increasing HBr concentration Increasing H2SO4 concentration Both None

 *Meant this to be NaBr* could be both (H+)

HBr + 1-butanol Increasing HBr concentration Increasing H2SO4 concentration Both None

HBr + 2-butanol Increasing 2-butanol concentration Using polar, protic solvent Both None

HBr + 1-butanol Running neat Using a non-protic solvent Both None

 both since each favors faster reaction rate in SN1

 8.2 On the Road Again

Starting from alcohols and/or ketones/aldehyde compounds with <4 Carbons :



1. Suggest a route to : 5 pts

A=



A

 (not only product)

Better: (but longer): yields unique and desired product



 A



1. Suggest a route to: B= 3 pts



B



1. Suggest a route to: C= 6 pts



C

**A** from first synthesis

 above ignores possible allylic substitution

 at C1

**Alternative where C1 is used as site for NH2 first:**



C