**EXERCISE #7: Precision Roadmapping**

Organic Chem II Alfred State College

**After random problem assignment, work together with the person to your left and right for 10 minutes and try to find the most unambiguous and minor-product free routes starting**

1) from ethyne to 1,1-dibromoethane



 gem-dihalide using HBr

2) from ethene to cis-3-hexene



first:



then:





3) from ethanol to trans 1,2-dibromo—1-butene



first:

 then:

4) from ethyne and any alcohol to trans C5H11CH=CHC3H7

first:



then:



finally:



5) from ethyne, and any alcohol to:



then: make terminal alkyne



first: make RX from

ROH

finally anti-Mark. hydrolysis with Brown 2 step (keto-enol shift)