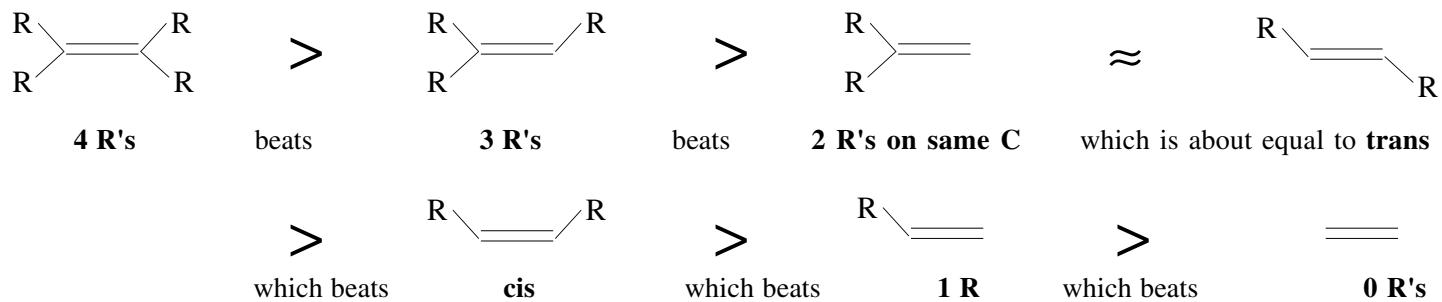
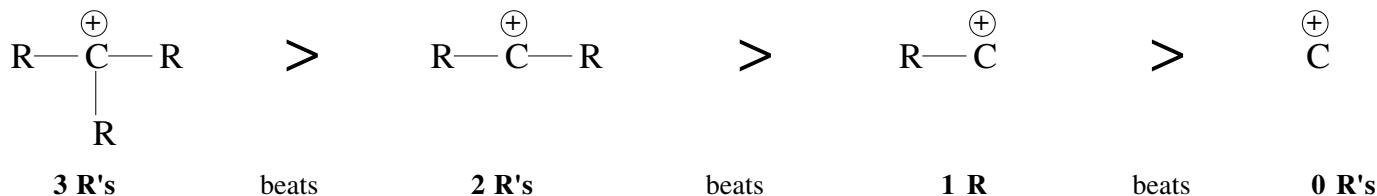
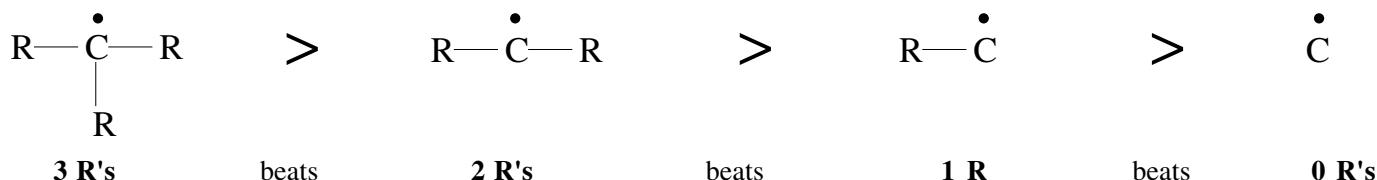
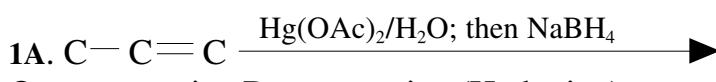


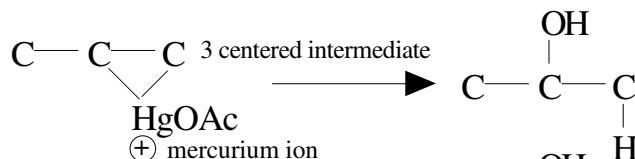
**Alkene stability:****Carbocation stability:****Radical stability:****Alkene Reaction Summary Part I:**

	MARK	ANTIMARK	NRS nonregioselective
<b>SYN</b>		<b>C*</b> <b>1C.</b> $\text{BH}_3$	<b>E*</b> <b>1E.</b> $\text{H}_2$ <b>2E.</b> $\text{KMnO}_4$ , $\text{OH}^-$ OR $\text{OsO}_4$ <b>3E.</b> $\text{KMnO}_4$ , Hot <b>4E.</b> $\text{O}_3$ <b>5E.</b> $\text{CHCl}_3$ , $\text{OH}^-$ or $\text{CH}_2\text{Cl}_2$ , $\text{Zn}(\text{Cu})$ <b>6E.</b> $\text{HIO}_4$ (Not included in part II)
<b>ANTI</b>	<b>A*</b> <b>1A.</b> $\text{Hg(OAc)}_2$	<b>premed411.com</b>	<b>F*</b> <b>1F.</b> $\text{X}_2/\text{CCl}_4$ or $\text{CHCl}_3$ <b>2F.</b> $\text{X}_2/\text{H}_2\text{O}$ is regioselective but is neither Mark nor Anti Mark because no H is added. <b>3F.</b> $\text{RCO}_3\text{H}$ then $\text{H}_3\text{O}^+$ (From Chapter 18, Dr. Snyder's class only.)
<b>NSS</b> non stereo specific	<b>B*</b> <b>1B.</b> $\text{H}_3\text{O}^+$ <b>2B.</b> $\text{HX}$	<b>D*</b> <b>1D.</b> $\text{HBr}$ , peroxides	*See Part II, where regiochem and stereochem are indicated graphically.

## Alkene Reaction Summary Part II



Oxymercuration Demercuration (Hydration)



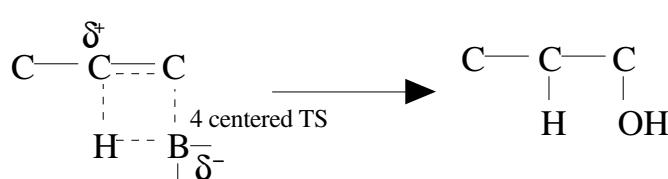
Acid Catalyzed Hydration



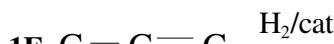
Addition of Hydrogen Halides



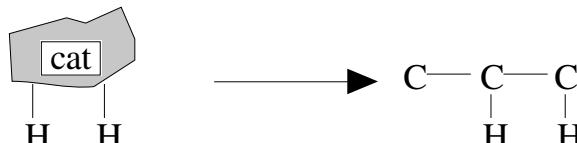
Hydroboration Oxidation



Addition of HBr with Peroxides



Catalytic Hydrogenation

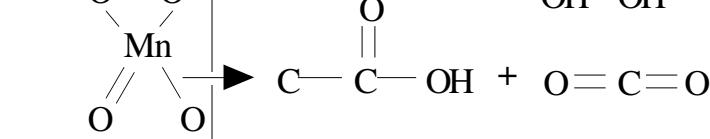


Syn Hydroxylation

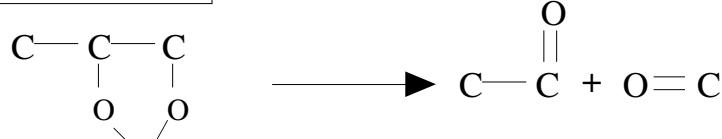
or  $\text{OsO}_4$  then  $\text{NaHSO}_3$



Oxidative Cleavage (Hot KMnO4)

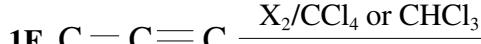


Oxidative Cleavage (Ozonolysis)

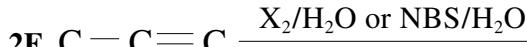
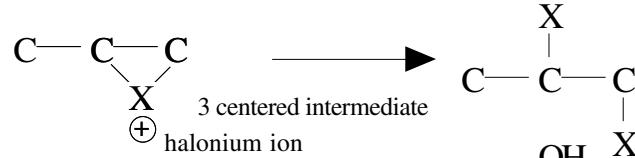


Addition of Carbenes

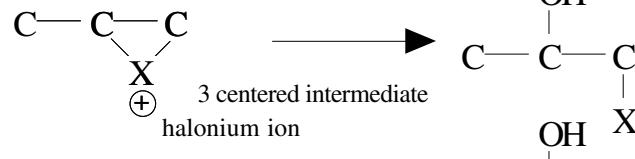
or  $\text{CH}_2\text{Cl}_2/\text{Zn}(\text{Cu})$



Halogenation



Halohydrin Formation



Anti Hydroxylation

