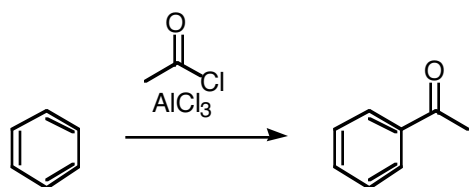
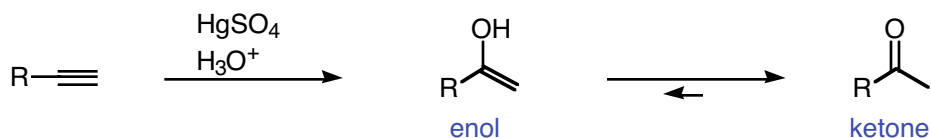
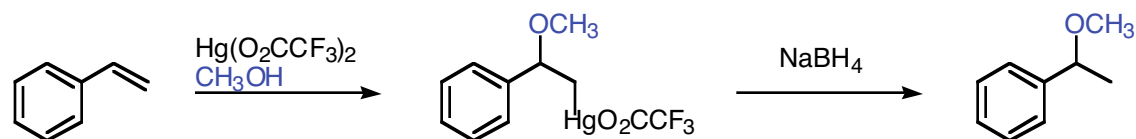


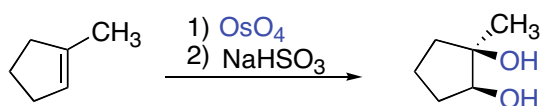
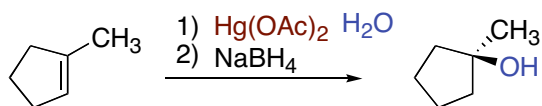
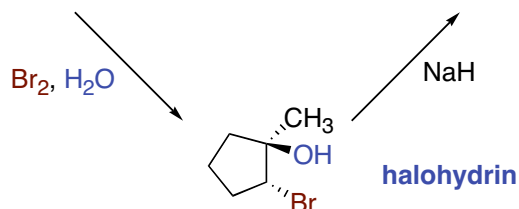
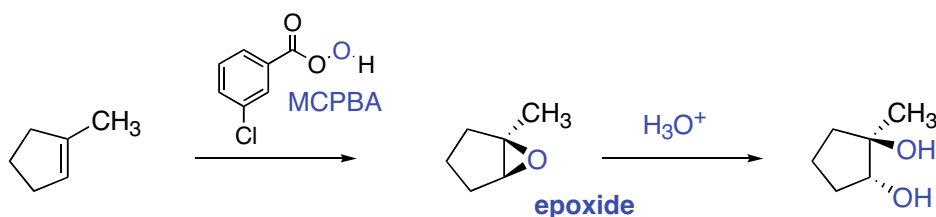
● Reactions for Exam 3

You need to know the following reactions for exam 3. Although you don't need to know all of the mechanisms for these reactions, knowing them makes it easier to understand the reactions and to figure out a reaction if you forget it. Consult the lecture notes for more details on the mechanisms.

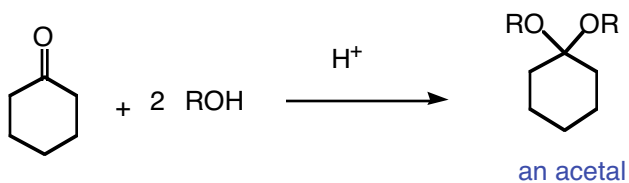
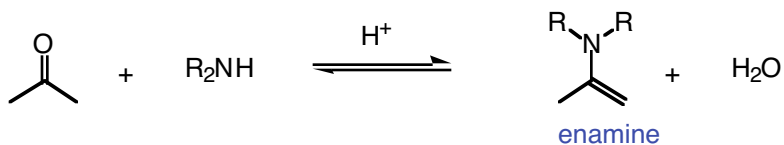
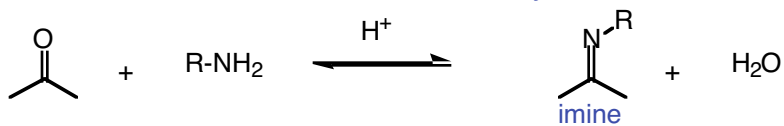
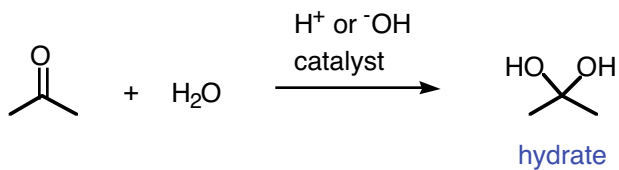
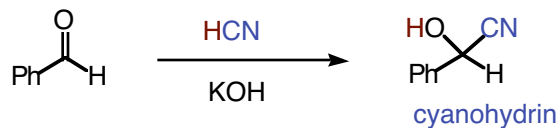
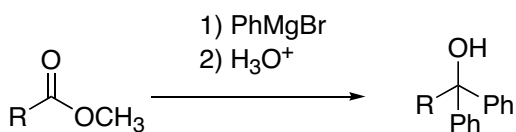
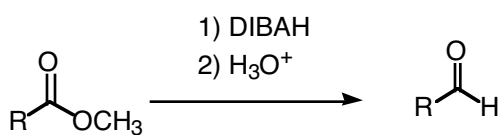
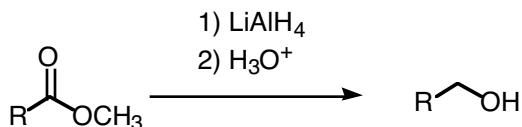
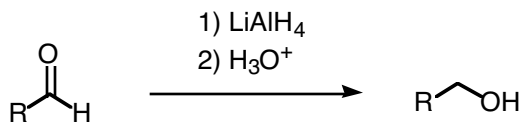
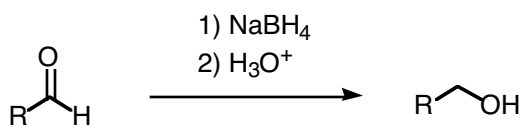
ELECTROPHILIC ADDITION REACTIONS

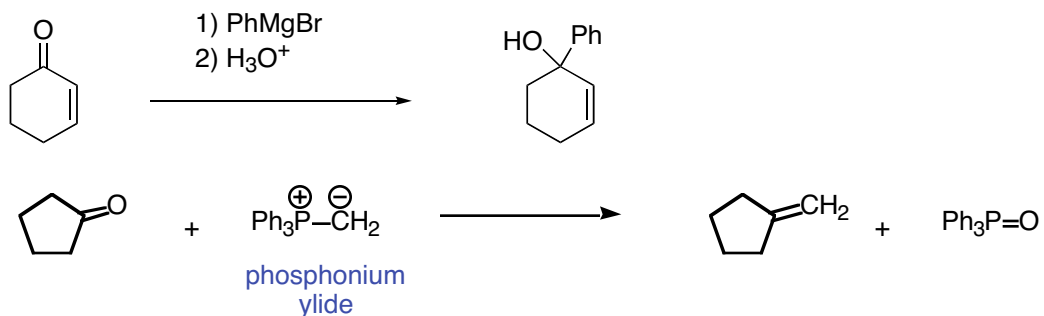


(note this is really an electrophilic substitution reaction)

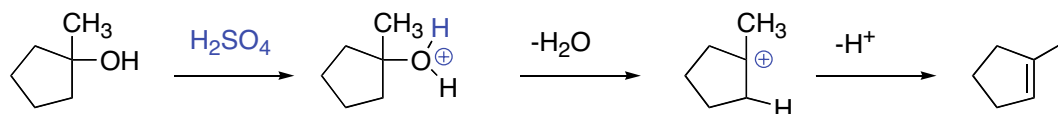


NUCLEOPHILIC ADDITION REACTIONS

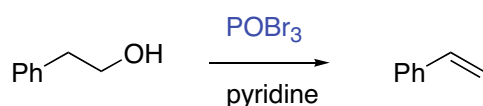




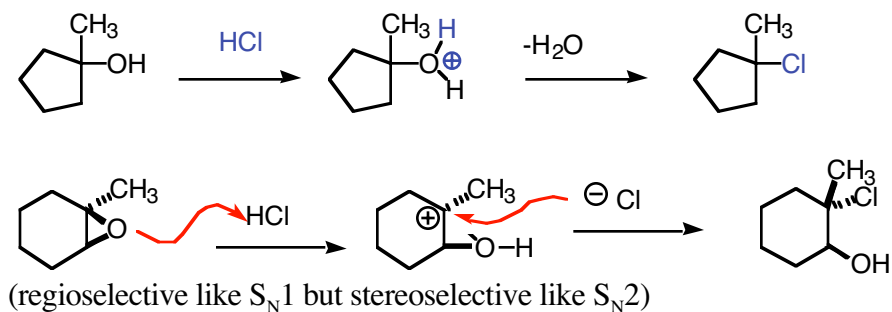
ELIMINATION REACTIONS (E1)



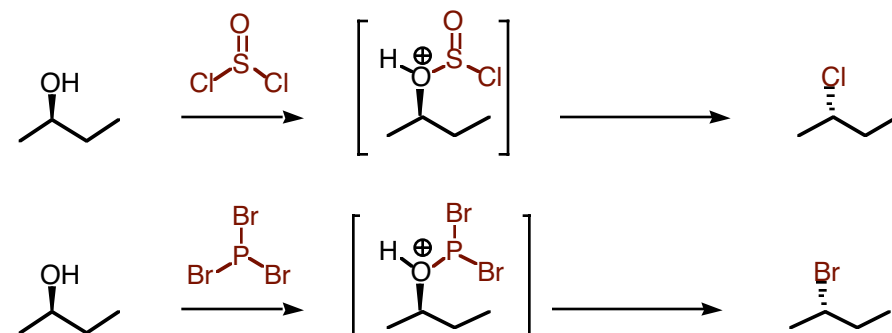
ELIMINATION REACTIONS (E2)

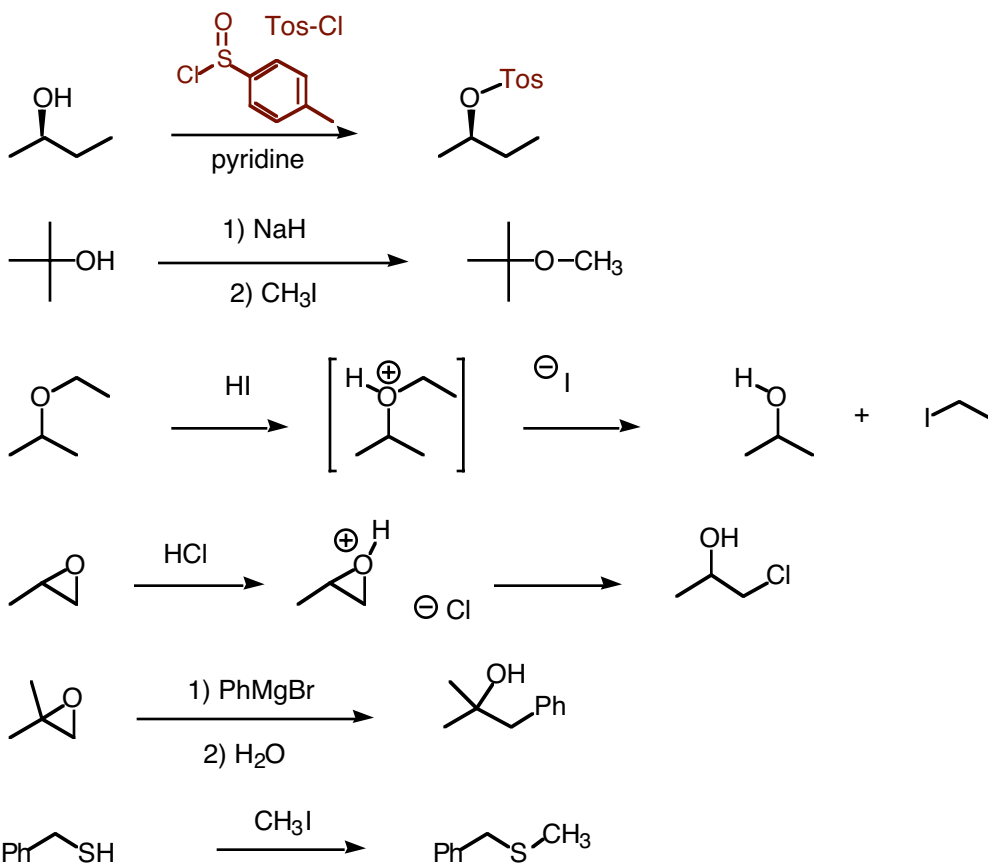


SUBSTITUTION REACTIONS (S_N1)

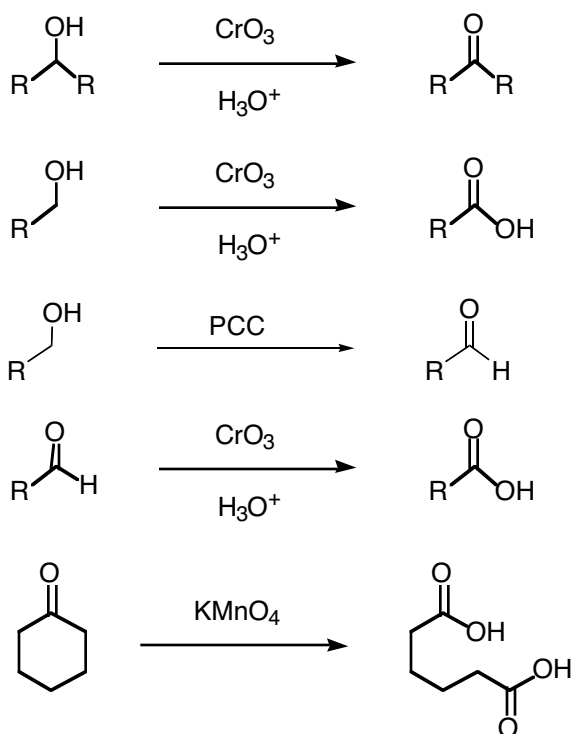


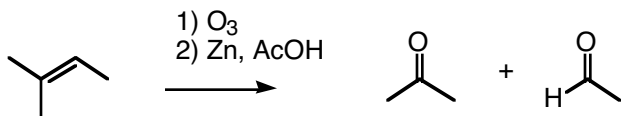
SUBSTITUTION REACTIONS (S_N2)



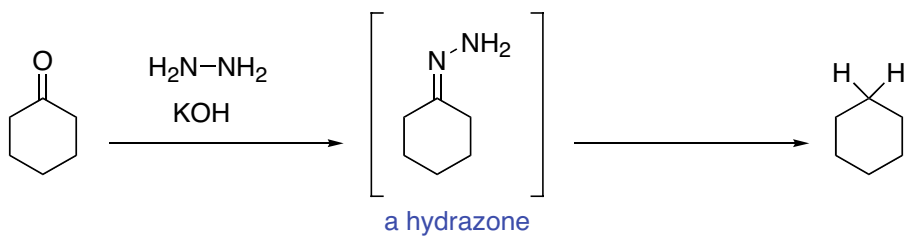
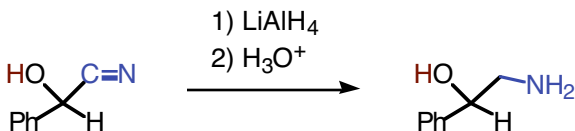
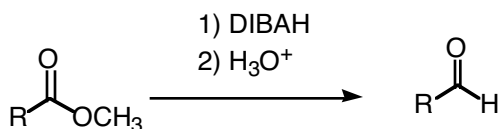
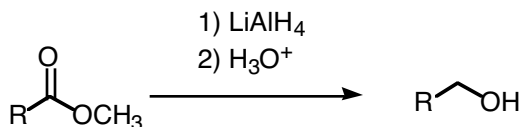
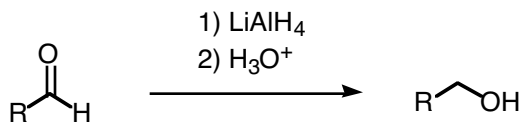
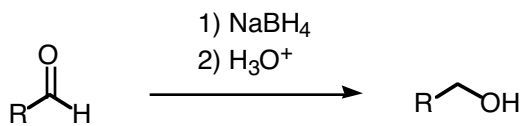


OXIDATION REACTIONS

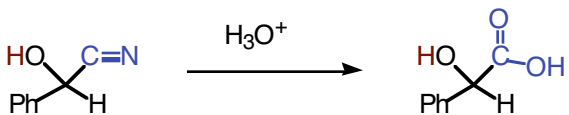
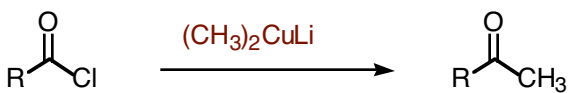
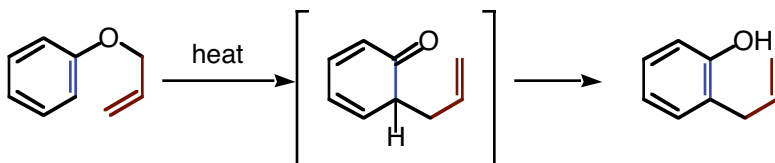




REDUCTION REACTIONS (note - hydride addition to carbonyls is also listed under the nucleophilic addition section)



OTHER REACTIONS



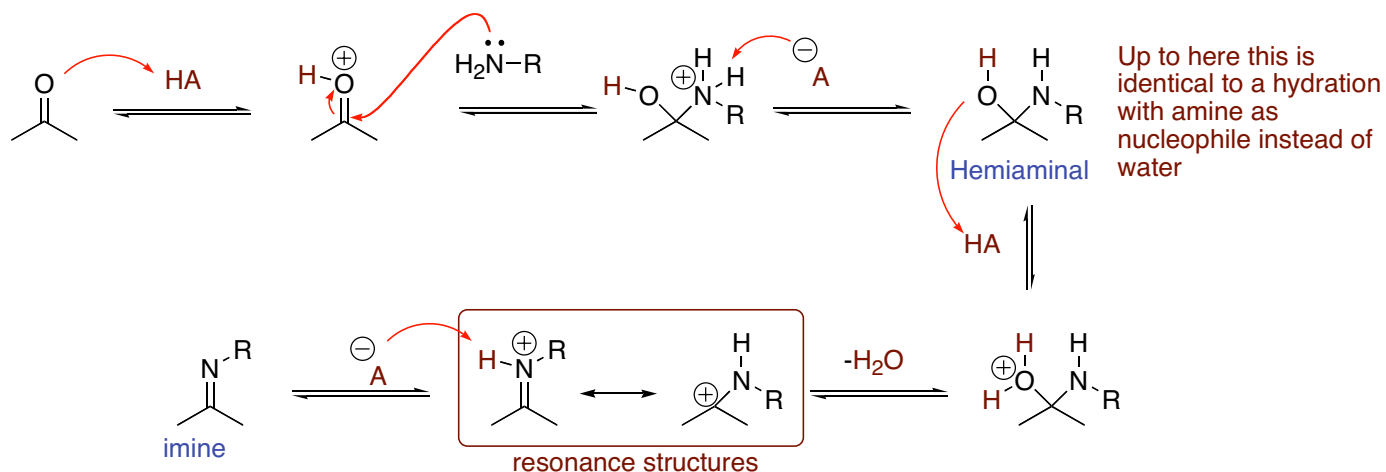
MECHANISMS

● Carbonyl Addition Reactions

You should know the following mechanisms for exam 3. Note that all of these are very similar to each other.

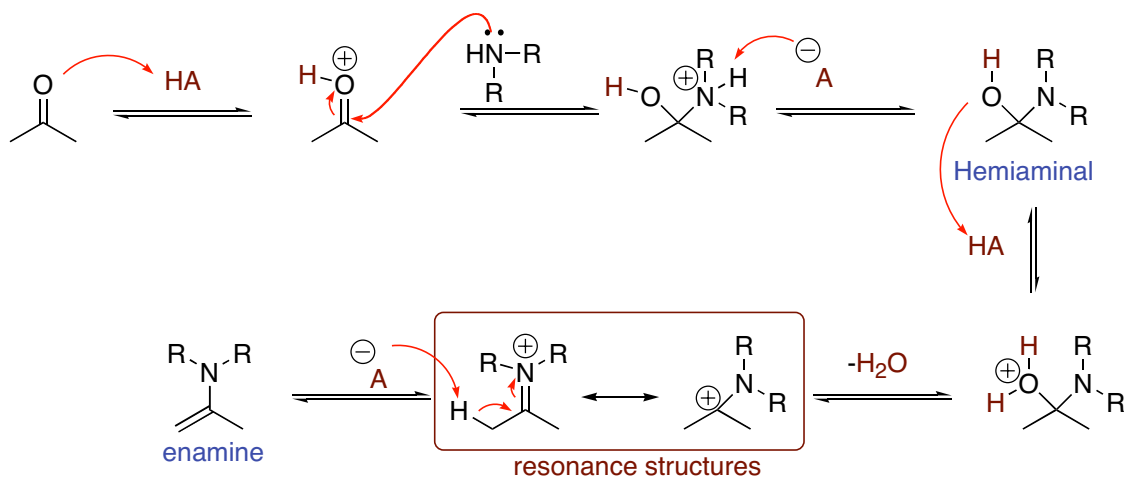
NEED TO KNOW MECHANISM

Mechanism for Imine Formation



NEED TO KNOW MECHANISM

Mechanism for Enamine Formation



The only difference is this last step. There is no proton on the nitrogen to come off, so a proton is taken off of the α carbon

NEED TO KNOW MECHANISM

Mechanism for Acetal Formation

