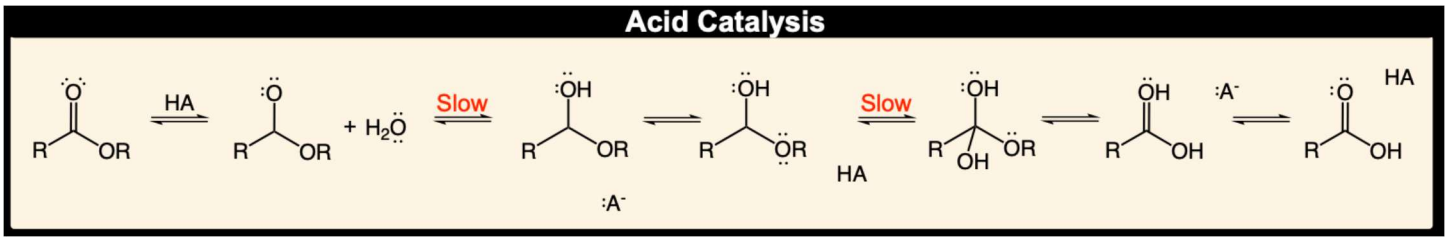
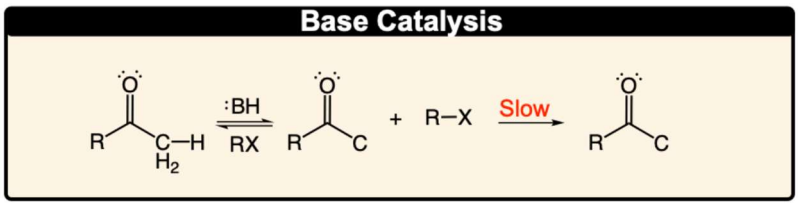
CONCEPT: ACID-BASE CATALYSIS

- **Acid catalyst** increases the rate of reaction by _____ a proton to a reactant.

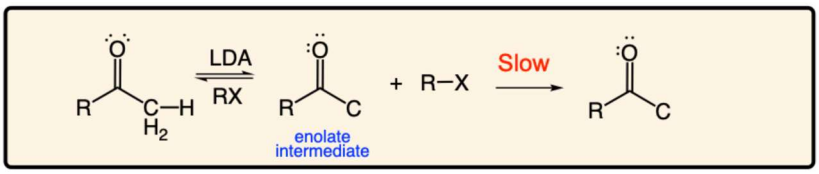


- **Base catalyst** increases the rate of reaction by _____ a proton from a reactant.

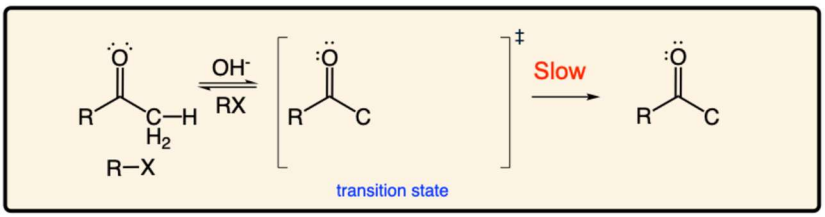


- There are ___ types of acid-base catalysis, depending on the _____ of the catalyst.

1. **Specific catalysis**
   - Proton transferred _____ the slow step
   - Catalyzed by _____ acid or base
   - _____concerted step

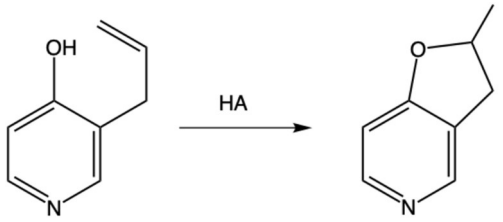


2. **General catalysis**
   - Proton transferred _____ the slow step
   - Catalyzed by _____ acid or base
   - Concerted step



CONCEPT: ACID-BASE CATALYSIS

EXAMPLE: Draw mechanism for acid-catalyzed hydration under both specific and general acid catalysis.



PRACTICE: Provide a mechanism and appropriate bases for both, specific and general base catalysis.