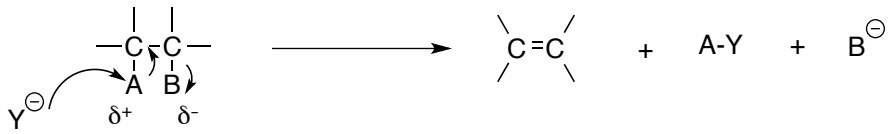
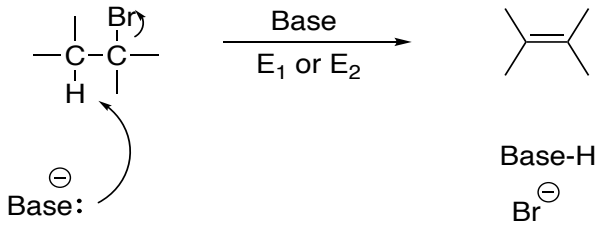
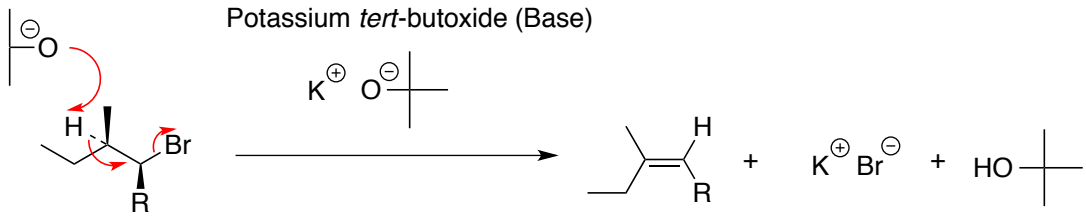
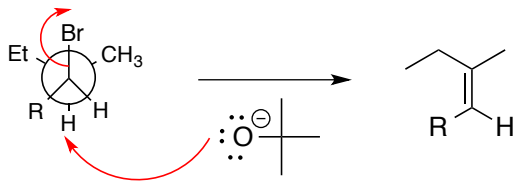
## Dehydrohalogenation



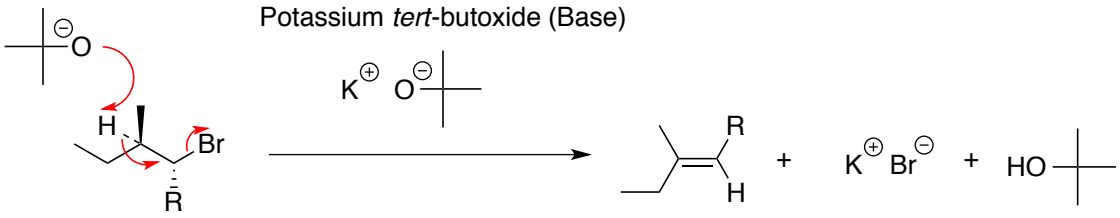

## Example

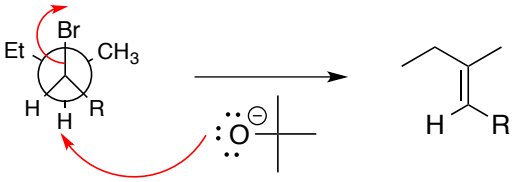



H and Br need to be in "Anti" configuration (anti-periplanar)

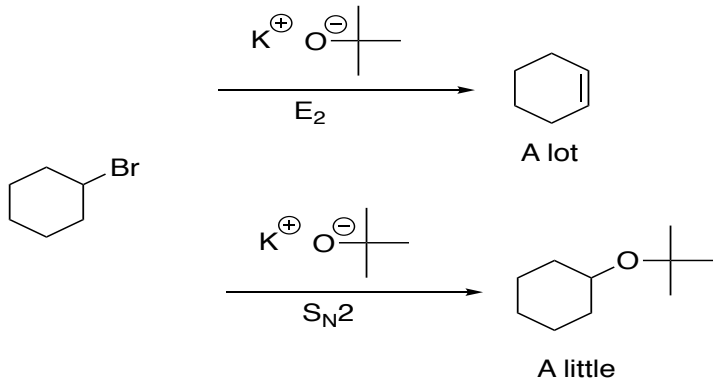
**Example #2 B: Start with different sterochemistry get different product stereochemistry (a diasteromer)**



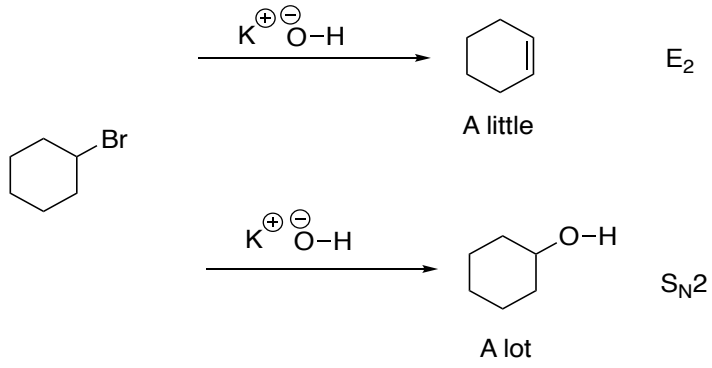




H and Br need to be in "Anti" configuration (anti-periplanar)

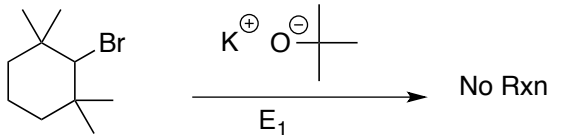
**Example #4: bulky nucleophiles/bases favour elimination**

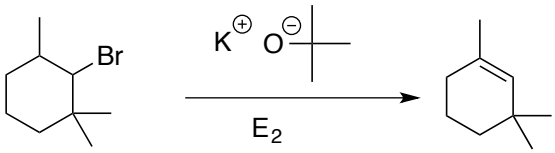



**Example #5: small nucleophiles/bases favour substitution**



**Limitations and Considerations**

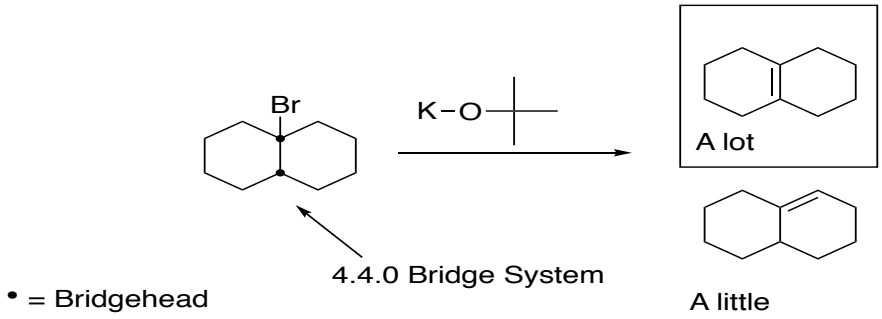


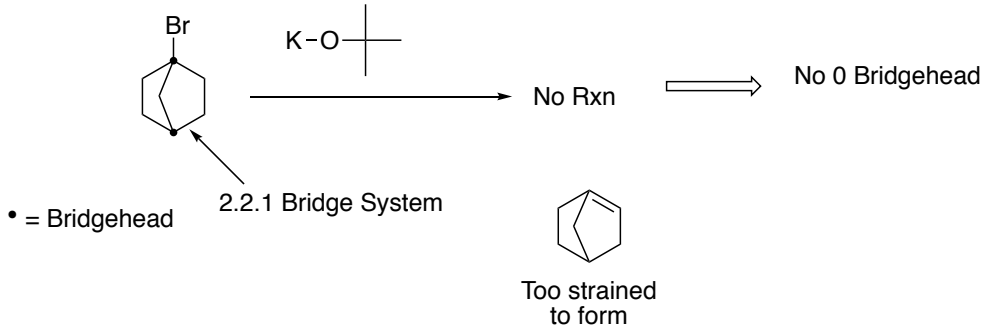

need hydrogen on adjacent carbon for loss of HBr

**Limitations and Considerations**

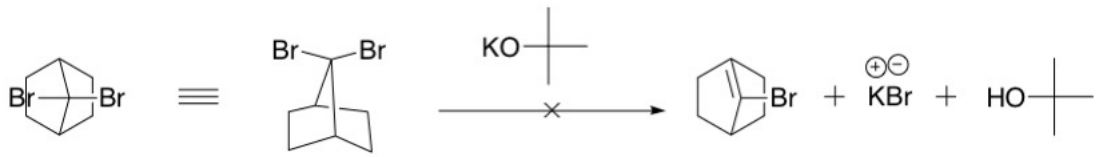
**Example:**




**Bredt Rule**: Bridged alkenes are only okay if one of the bridges is a "zero" (0) bridge in small rings <9



To determine whether an elimination can occur, ask yourself three questions:




1. Is there a good leaving group present?
   Eg. Yes, Br is a good leaving group

2. Is there a hydrogen on the carbon next to the carbon containing the leaving group?
   Eg. Yes, on the bridge-heads on either side of the carbon containing the Br.

3. Is Bredt's Rule being followed?
   Eg. No, if a double bond was being formed, it would be at a bridge-head and Bredt's rule states that a double bond cannot be formed at a bridge-head if the rings are small and all bridges >0. (double bond too strained)

Substitution would likely not occur either as the electrophilic site is hindered (tertiary carbon).