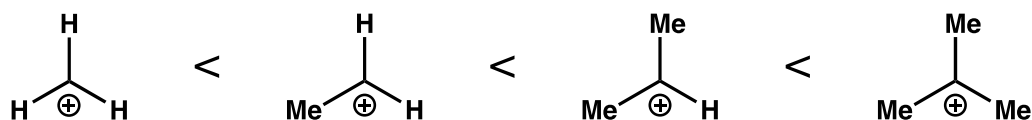
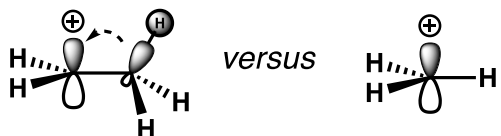
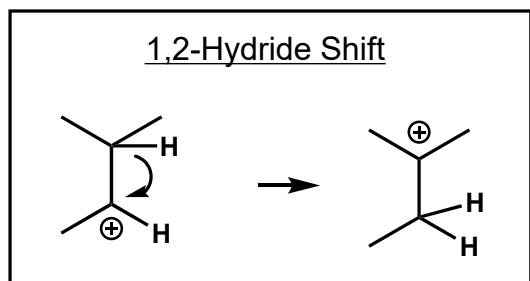
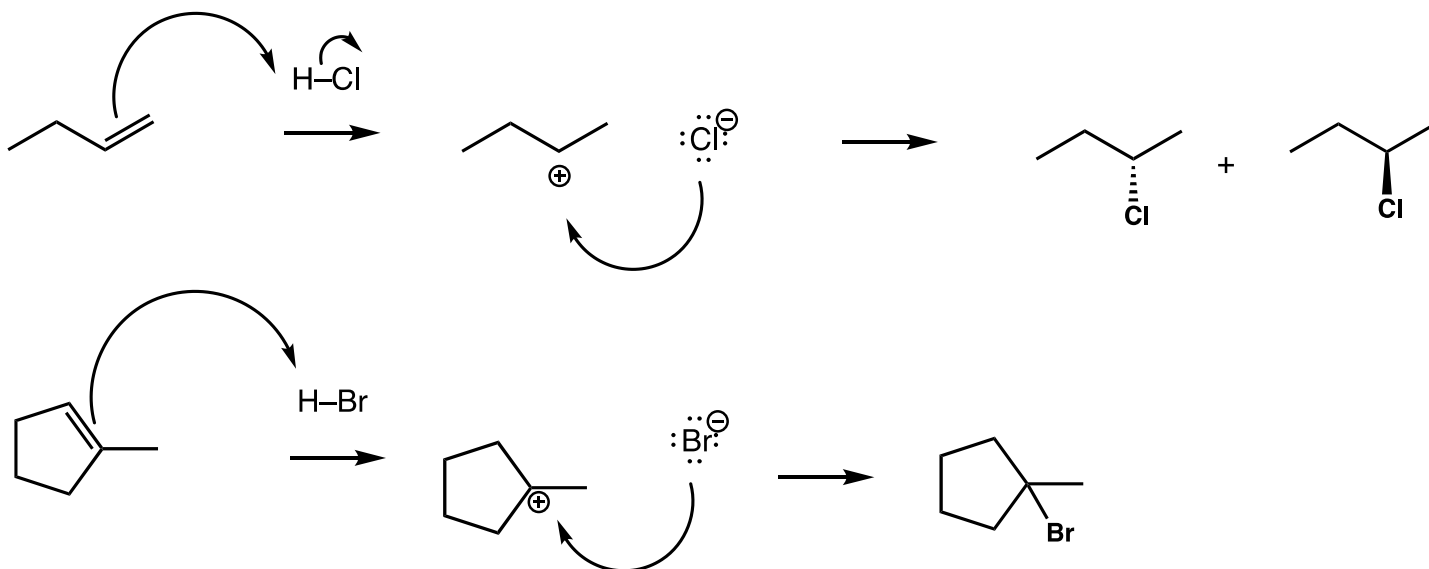


Review: Carbocation Stability

More substituted carbon leads to a more stabilized carbocation due to hyperconjugation.

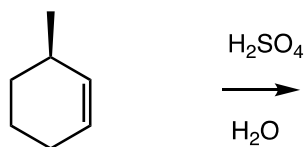
Hyperconjugation**Alkene Addition Reactions**

Provide the products of the following reactions, and show the arrow-pushing mechanism that leads to each product.

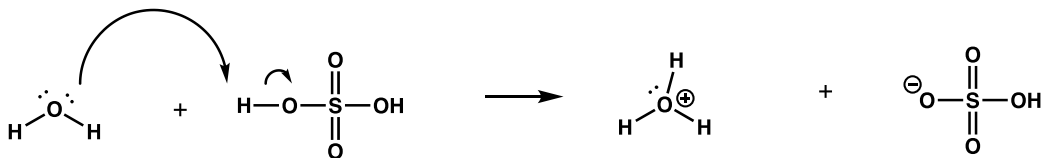


Provide the product of the following reaction, and show the arrow-pushing mechanism.

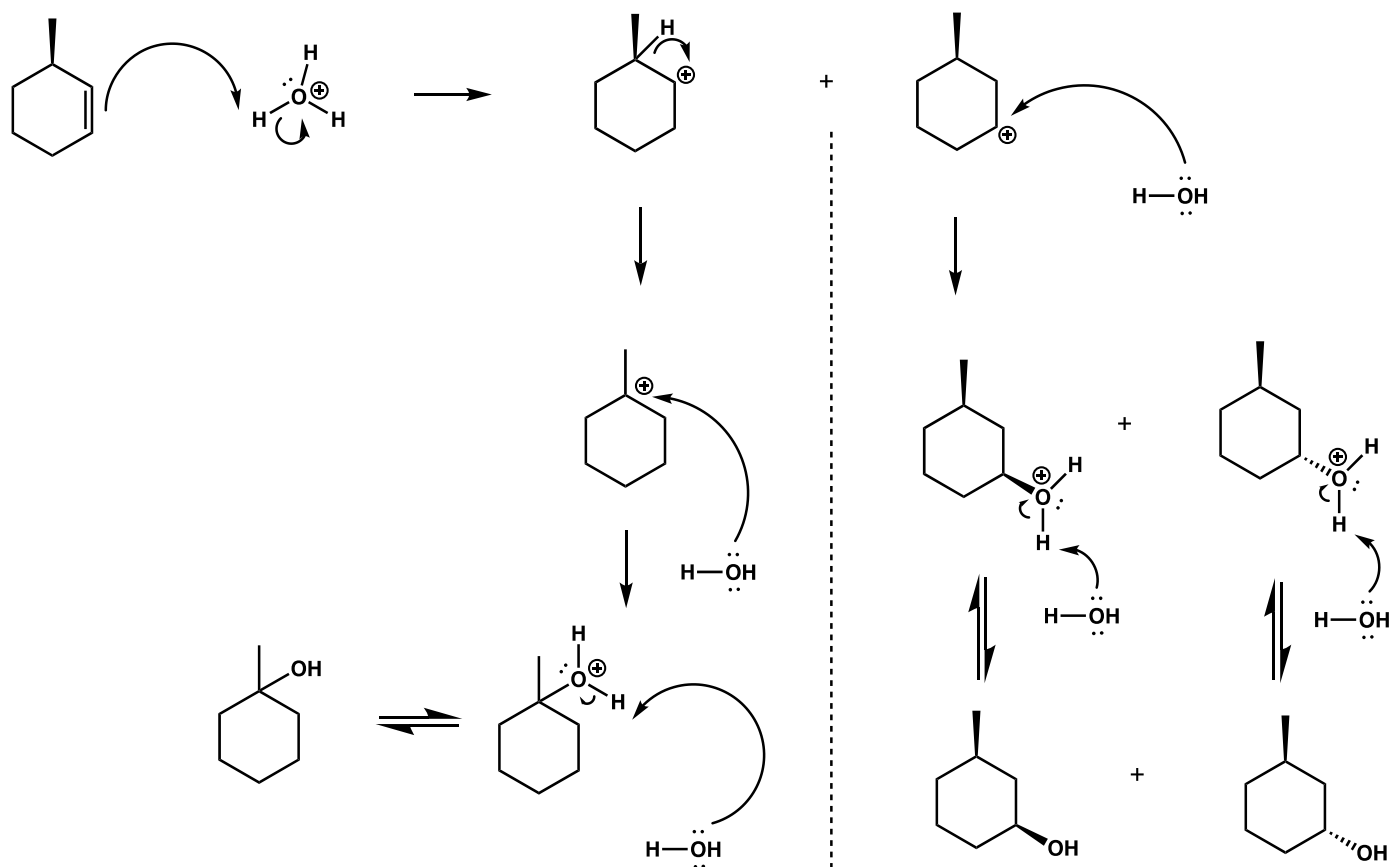
If there are multiple reactions taking place, show each of those.



strong acid protonates water

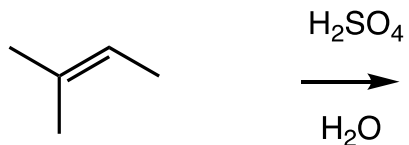


alkene hydration

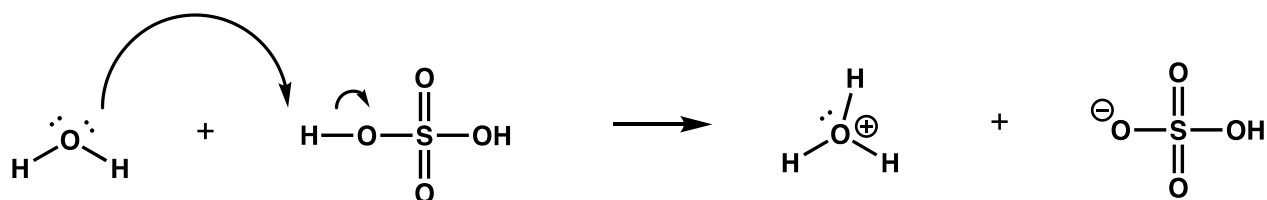


Provide the product of the following reaction, and show the arrow-pushing mechanism.

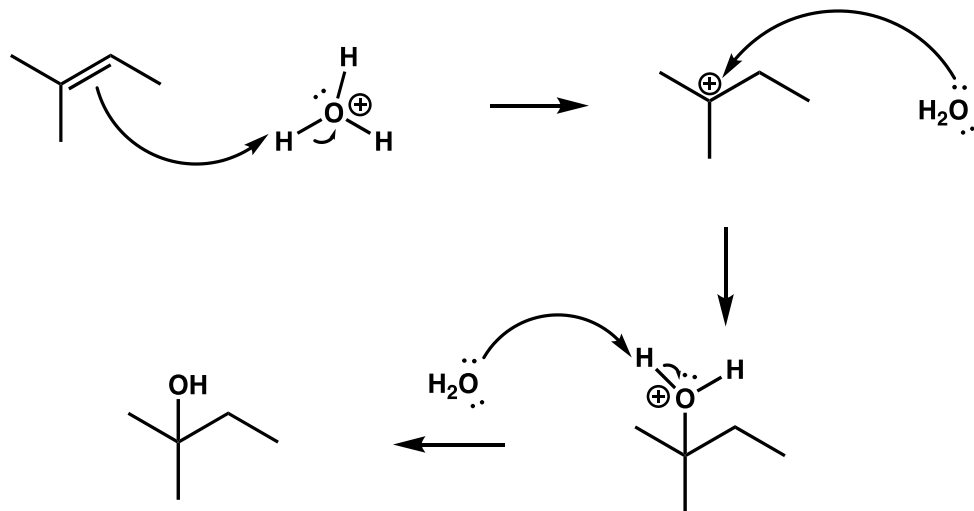
If there are multiple reactions taking place, show each of those.

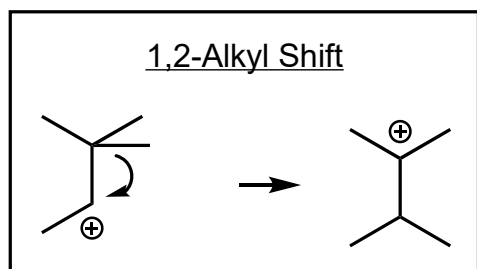


strong acid protonates water



alkene hydration



1,2-Alkyl Shift in Reactions with Alkenes

Rarely, 1,2-alkyl shifts can also be observed. Provide the mechanisms and products for the following reactions.

