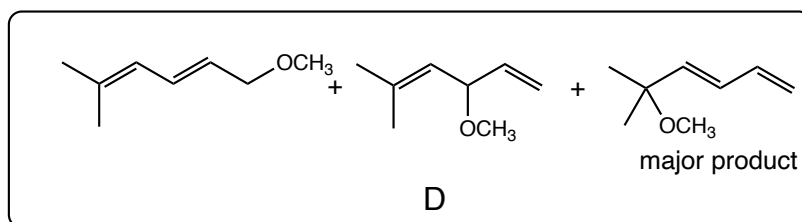
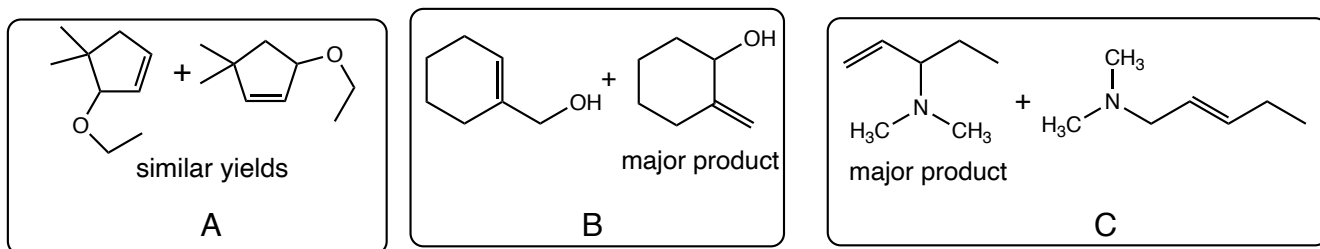
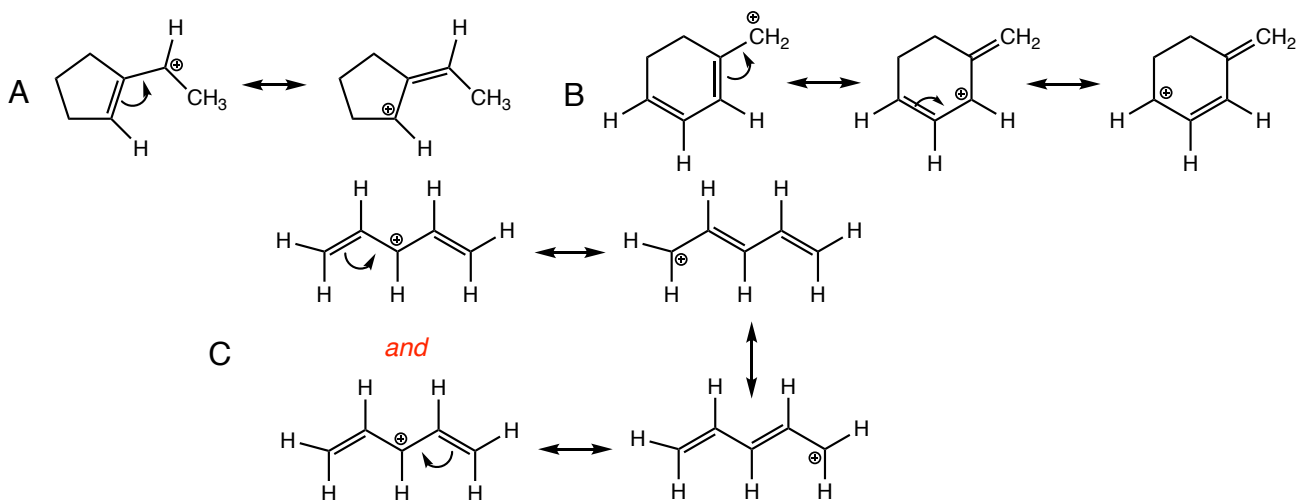
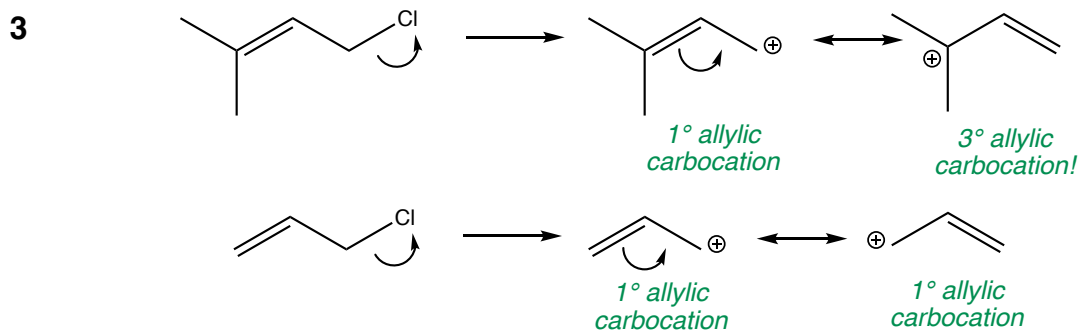


Chapter 17 Practice Problems

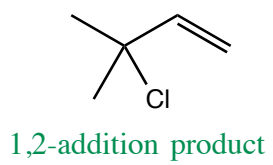
Solutions



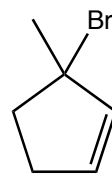
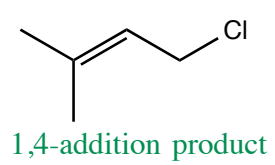
- The rate determining step for an S_N1 reaction is formation of the carbocation intermediate. The difference in rate, therefore, can be traced to the stability of the intermediate carbocation. The more stable the carbocation, the faster the rate
- Loss of Cl from the bottom compound forms a 1° allylic carbocation which has a resonance form that is also 1° allylic
- However, loss of Cl from the top compound forms a 1° allylic carbocation that has a resonance form that is the much more stable 3° allylic
- Thus, the top reaction is 6000 times faster than the bottom reaction because the carbocation intermediate that is formed is much more stable than the carbocation below (i.e., it is easier to form)



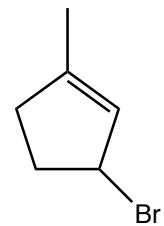
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1,2-addition product

1,4-addition product
