EXERCISE #9: Allylic resonances

Organic Chem II Alfred State College

9.1. Draw other possible resonances and decide if they are equivalent, more stable

or less stable



9.2 Draw all the other possible radicals that can form and decide whether or not another *equivalent* resonance structure exists for each species.
 *resonant ? other resonance structure(s) if yes*



 yes no



 yes no



 yes no



 yes no



 yes no



yes no

9.3 Circle the compounds below that will yield the same carbocation on ionization (=removal of halogen)



**9.4a. Draw all 4 possible carbocations formed with Br – in the proposed decomposition below.**

 ***Possible carbocations***



 **+ Br-**

**9.4b Which is the most likely to form ?**

**9.5. For the compound below, which allylic site, A or B, will be more likely to lose H radical and form a symmetric radical allyl ? Draw the final preferred radical allyl**



 **B**

 **A**

**9.6 For the compound below, identify the site (A-C)most likely to lose H radical and form**

 **symmetric radical allyl. Sketch the final preferred radical allyl.**

 **C**



 **A B**

**(see Problems 10.5-10.7 pp. 287-288 for more practice with radical allylic shifts)**