When analyzing allylic halogenation reactions (NBS and hv)

- 1. Consider <u>all</u> possible allylic radicals that can be formed.
- 2. Analyze <u>all</u> contributing structures for <u>all</u> of the allylic radicals.
- 3. Add a Br atom at the site of the unpaired electron for <u>all</u> contributing structures for <u>all</u> of the allylic radicals.
- 4. From <u>all</u> of the possible products, the predominant product is the one THAT IS THE MOST STABLE ALKENE – the most substitued alkene – alkyl groups stabilize alkenes – *trans* over *cis*.
- 5. Note: It is OK if the product you choose derives from an allylic radical contributing structure that is a minor contributor. FOR THIS REACTION WE ONLY CARE ABOUT THE RELATIVE STABILITIES OF THE PRODUCT ALKENES.

