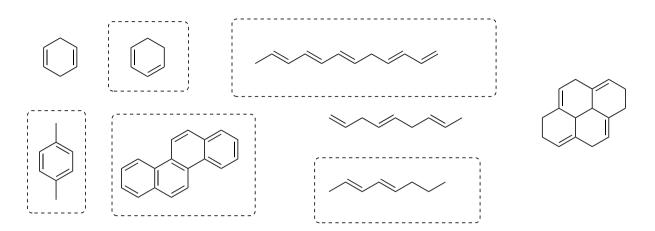
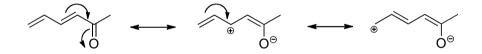
## Problem Set #1: Chapter 20-Key

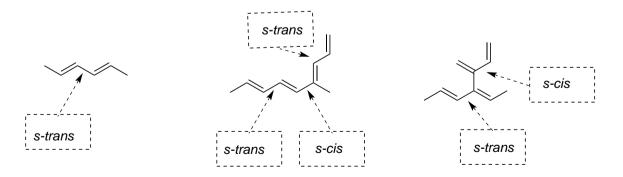
1. Which of the following coumpounds contain a conjugated polyene?



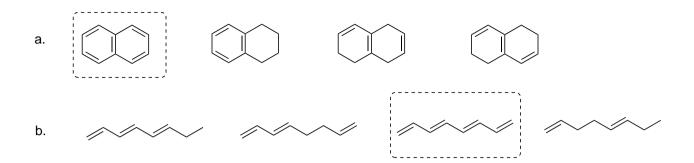
2. Write at least 3 valid resonance strutures for the following conjugated system.



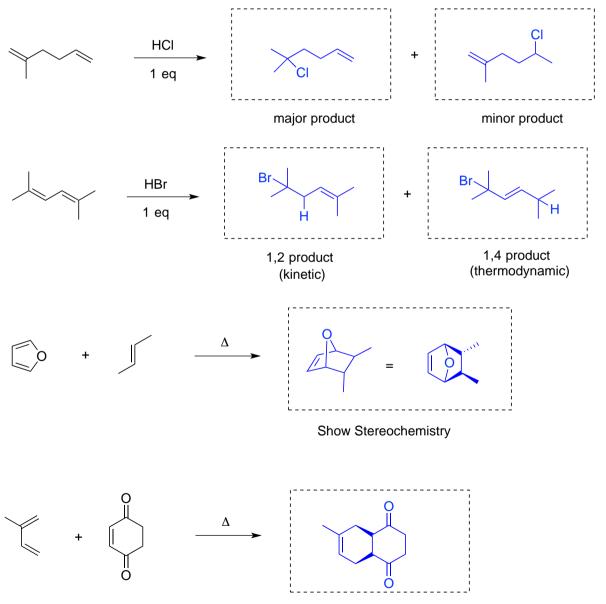
3. Characterize the following conjugated polyenes as s-cis or s-trans.



4. Which of the compounds in each group would you expect to have a higher  $\lambda_{max}$  UV absorption?



5. Complete the following transformations



Show Stereochemistry