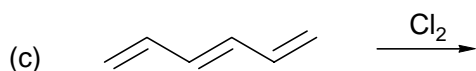
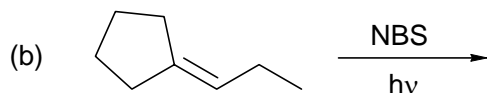
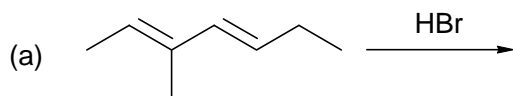


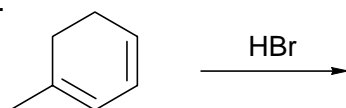
**3** 1. Give **all** the product(s) of the following reactions neglecting stereoisomers.



**1** 2. Draw the thermodynamic product of the following reaction.

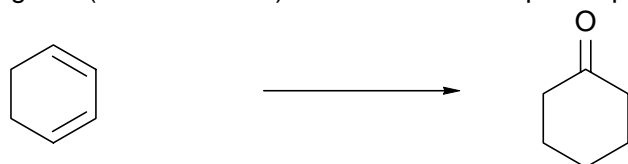


**1** 3. Draw the 2 cations which are intermediates in the following reaction. **Circle** the most stable one.



**2** 4. Draw the HOMO and LUMO of the pentadienyl anion.

**2** 5. Show how you would accomplish the following synthesis. Give all isolated intermediate products and reagents (over the arrow). More than one step is required.



**1** 6. Draw the best resonance structure of the following conjugated enone.

