

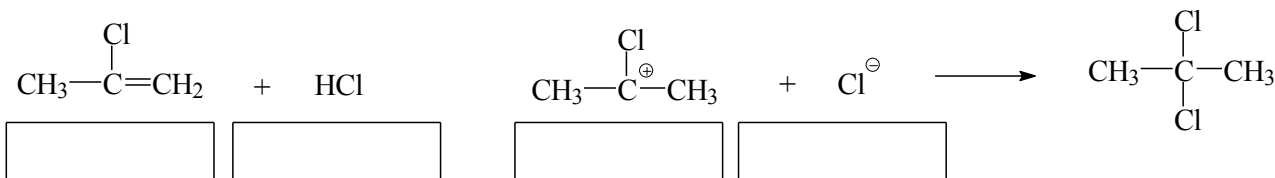
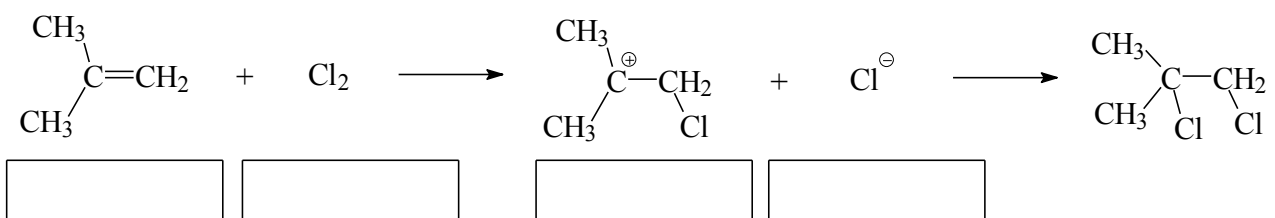
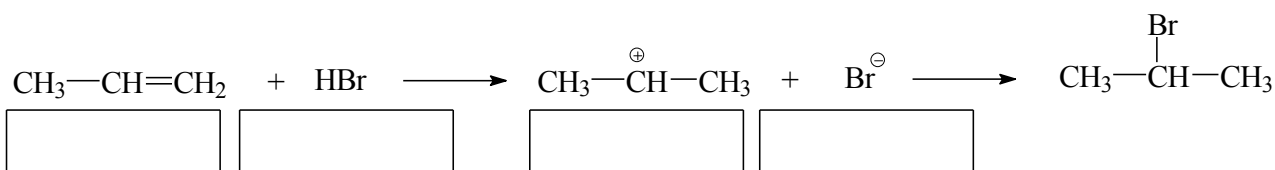
CHEM1002 Problem Sheet 3 (Week 3)

**Work through the ChemCAL modules "Alkenes, Benzene and Alkynes" and  
"Elimination and Electrophilic Addition Reactions"**

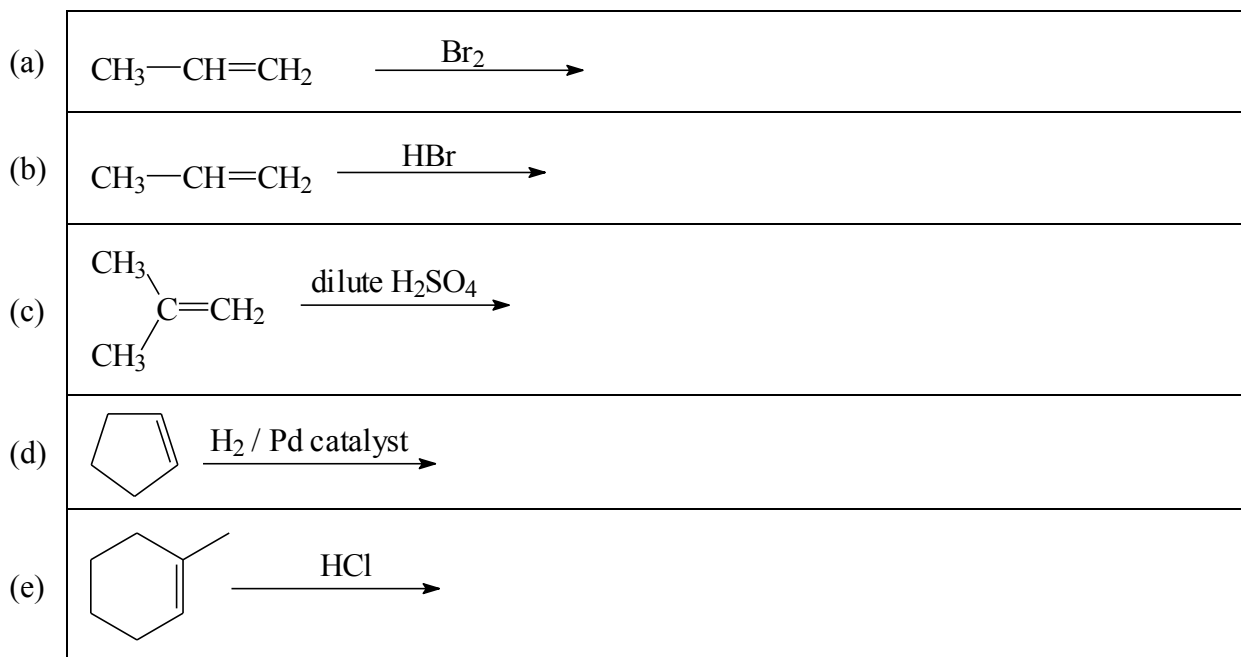
1. Draw the structures of the following compounds.

- (a) (Z)-2-butene
- (b) (E)-2-butene
- (c) (Z)-2-methyl-3-hexene

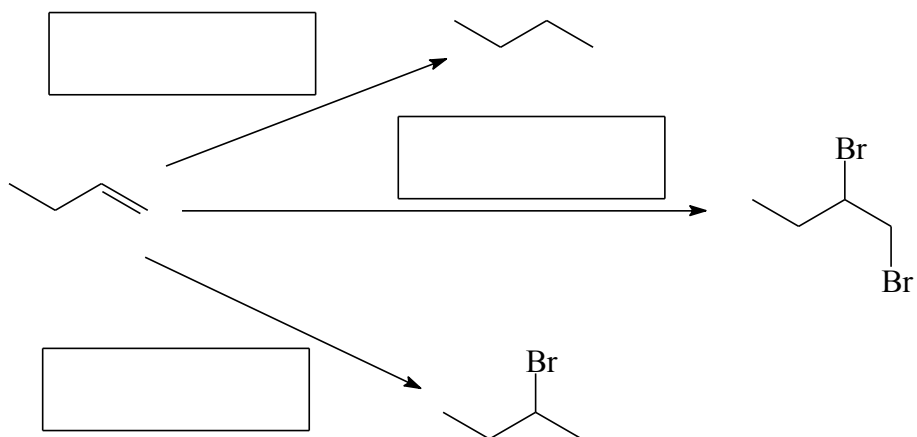
2. Write *electrophile* or *nucleophile* below the appropriate species in the following reactions.



3. What is the major product in the following reactions?



4. Complete the scheme by filling in the correct reagents.



5. What reagent would effect the following changes?

