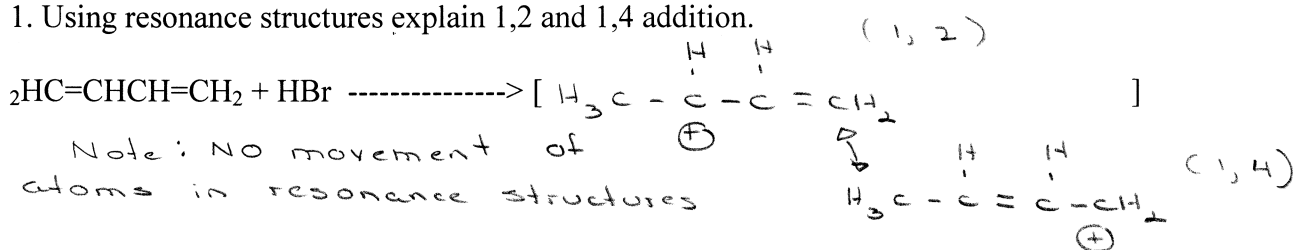
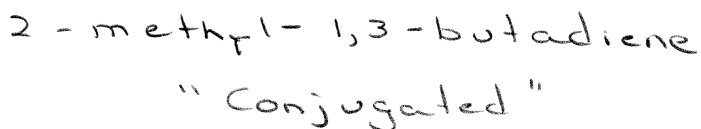
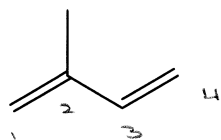
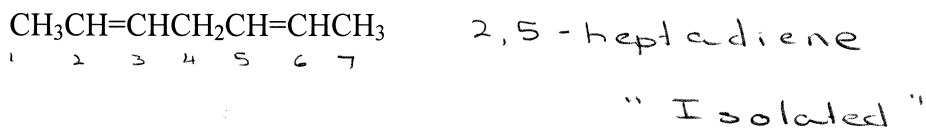


## Chapter 11: "Dienes" Worksheet

1. Using resonance structures explain 1,2 and 1,4 addition.

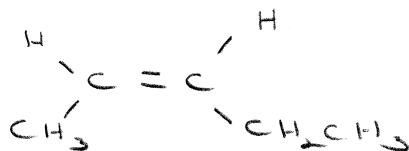
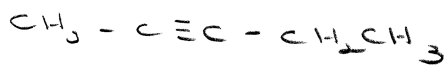


2. Give IUPAC names for the following dienes and indicate if they are Isolated or Conjugated.



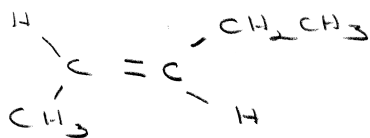
3. Give the structures and of the chief organic products expected from the reaction of 2-pentyne with:

$\text{H}_2, \text{Pd-C}$



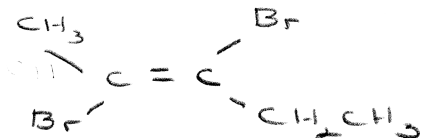
"syn"

$\text{Na}, \text{NH}_3(\text{liq})$



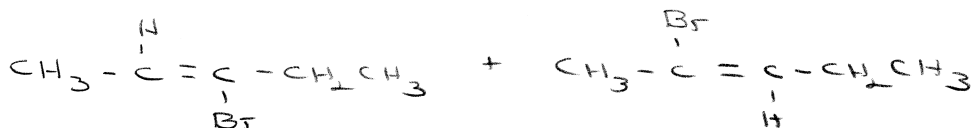
"Anti"

$\text{Br}_2/\text{CCl}_4$



"Anti"

$\text{HBr}$



(Mark if possible....)

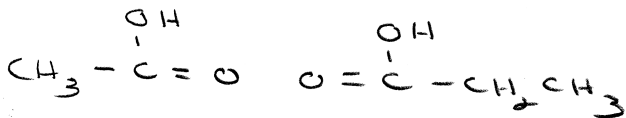
Na

N.R. (Terminal Alkynes ONLY)

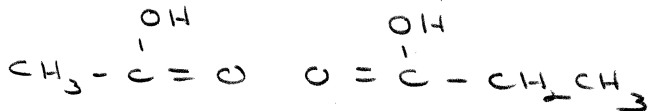
AgNO<sub>3</sub>

N.R. (Terminal Alkynes ONLY)

KMnO<sub>4</sub>



O<sub>3</sub>; then Zn/H<sub>2</sub>O



ALL  
carboxylic  
Acids

KMnO<sub>4</sub>, heat

