CH 223 Worksheet 9

CII 225 Worksheet 9
1. The addition of HCl to an alkene produces 2-chloropropane. What is the alkene?
a) HC= c-cH3 + HC(CH2-c-cH3 1-propens hydrochloric acid b) An alkene has adouble
occur with cyclopentane or cyclohexane. How do you account for the reactivity of cyclopropane?
cyclopropane is Cyclopentane & cyclohexane are not
3. Which of the following molecules is unsaturated?
(a) Saturated CH3CH2CH3 (b) H2C CH2 Saturated
H_2C CH_2
(c) CH_3C-OH (d) $CH_3CH=CHCH_3$ $Unsaturated$ $Unsaturated$
4. What are the characteristic hybrid orbitals employed by (a) carbon in an alkane, (b) carbon in a double bond in an alkene, (c) carbon in the benzene ring, (d) carbon in a triple bond in an alkyne? (a) $5\rho^3$ (b) $5\rho^2$ (c) $5\rho^2$ (d) $1+-c=c+H$
5. Using condensed structural formulas, write a balanced chemical equation for the addition reaction of 2,4-dimethyl-2-pentene with bromine. CH3 CH3 CH3 CH3 CH3 CH3 CH3 CH
6. Give IUPAC names for the following:
(a) $\frac{\text{CH}_3\text{CH}_2\text{CH}_3}{\text{3CHCH}_2\text{CH}_2\text{CH}_3}$ (b) $\frac{\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3}{\text{CH}_3}$ (b) $\frac{\text{C}=\text{C}}{\text{H}}$ $\frac{\text{C}_3\text{C}_4\text{C}_4\text{C}_5\text{C}_5\text{C}_4\text{C}_5\text{C}$
(c) $\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} $
methyl cyclobutane 4-methyl-hex-1-yne