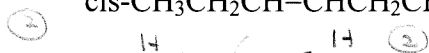
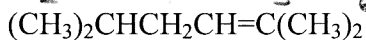


## Chapter 8: "Alkenes" Worksheet

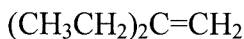
1. Draw out the structural formula and give the IUPAC name of:



(Z)-3-hexene



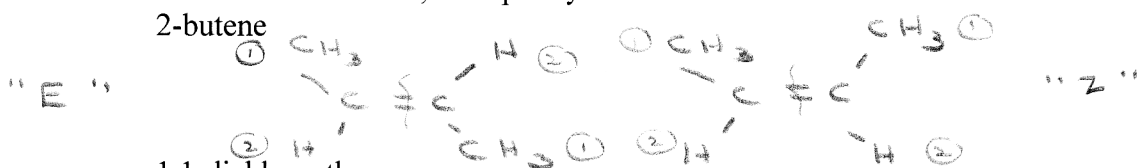
2,5-dimethyl-2-hexene



2-ethylbutene

2. Indicate which of the following compounds show geometric (cis-trans) isomerism, draw the isomeric structures, and specify each as Z or E.

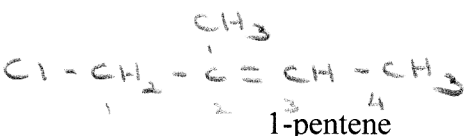
2-butene



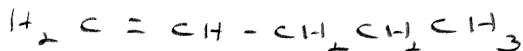
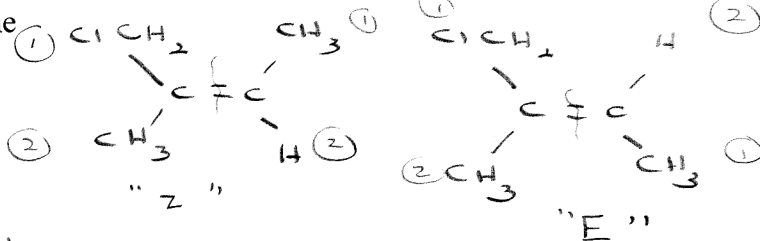
1,1-dichloroethene



1-chloro-2-methyl-2-butene



1-pentene



3. List the rules for E1 vs. E2 vs. S<sub>N</sub>2 vs. S<sub>N</sub>1

(1) KOH in Alcohol, E2, "Saytzeff"  
NaOH

(2) OTHER Strong Base (i.e. NaOCH<sub>3</sub>)

S<sub>N</sub>2 ∝ CH<sub>3</sub>X, 1°      E2 ∝ 2°, 3°

(3) Weak Base (i.e. dilute OH<sup>-</sup>)

S<sub>N</sub>1 + E1 MIXTURE 2°, 3°

Also Problem #6 a, c, d, e, predict the major product and name it.