

Review Session I

Sept 30, 2011

Answers

Post Dark scan

① Draw all stereoisomers, assign all absolute configurations, establish relationships

(a)

Relationships

ER/ES enantiomers

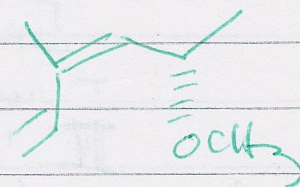
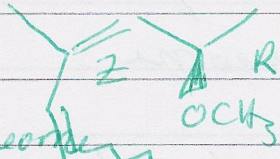
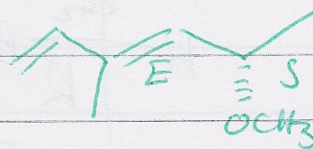
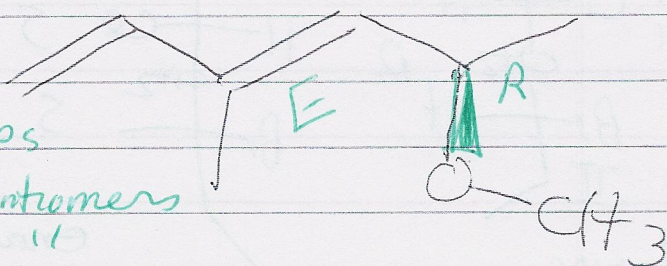
ZR/ZS " "

ER w ZR
w ZS

diastereomers

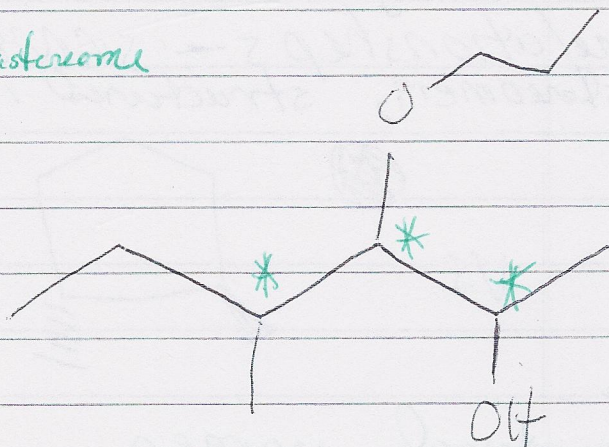
ZR w ES
w ZS

diastereomer

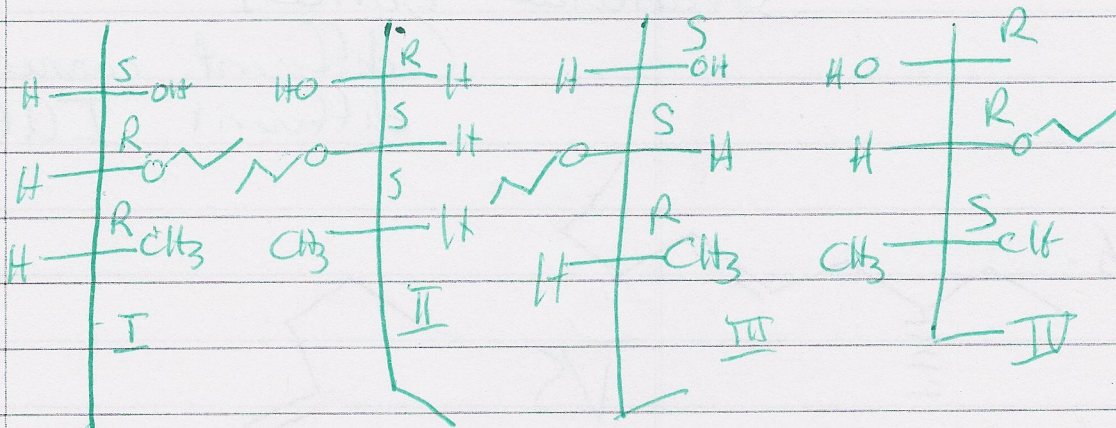


(b)

$$2^n = 8$$



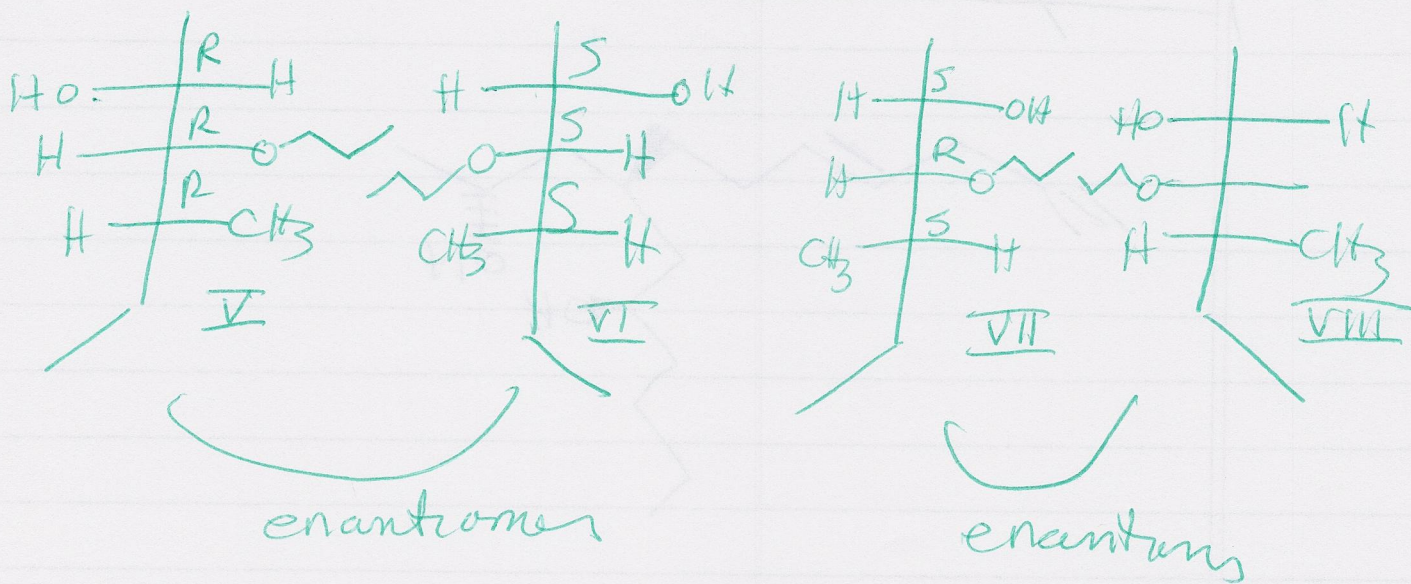
Do the same as a but in Fisher Projection



enantiomer

enantiomer

b Cont II



$$\begin{array}{c}
 \text{I} \text{ } \bar{\omega} \quad \text{III} \quad \text{VI} \\
 \quad \quad \text{IV} \quad \text{VII} \\
 \quad \quad \text{V} \quad \text{VIII}
 \end{array}$$
 diastereomers

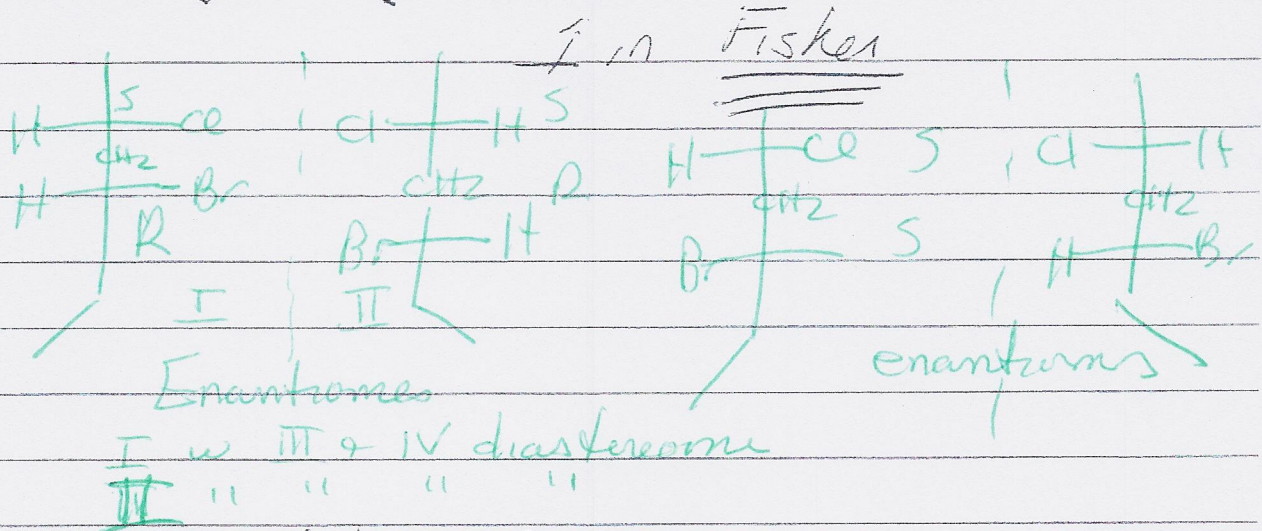
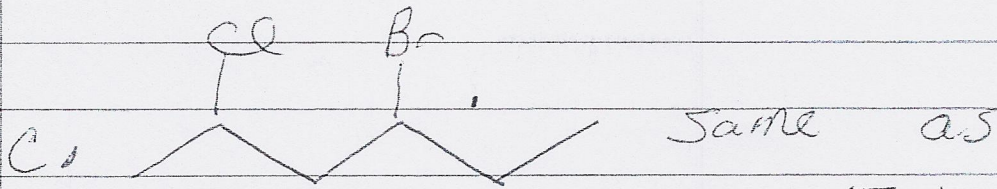
$$\begin{array}{c}
 \text{II} \text{ } \bar{\omega} \quad \text{III} \quad \text{VI} \\
 \quad \quad \text{IV} \quad \text{VII} \\
 \quad \quad \text{V} \quad \text{VIII}
 \end{array}$$
 diastereomers

$$\begin{array}{c}
 \text{III} \text{ } \bar{\omega} \quad \text{V}, \text{VI}, \text{VII}, \text{VIII} \\
 \text{VI} \quad \text{V} \quad \text{"} \quad \text{"} \quad \text{"} \quad \text{"}
 \end{array}$$
 diastereomers

$$\begin{array}{c}
 \text{V} \text{ } \bar{\omega} \quad \text{VII}, \text{VIII} \\
 \text{VI} \text{ } \bar{\omega} \quad \text{"} \quad \text{"}
 \end{array}$$
 diastereomers

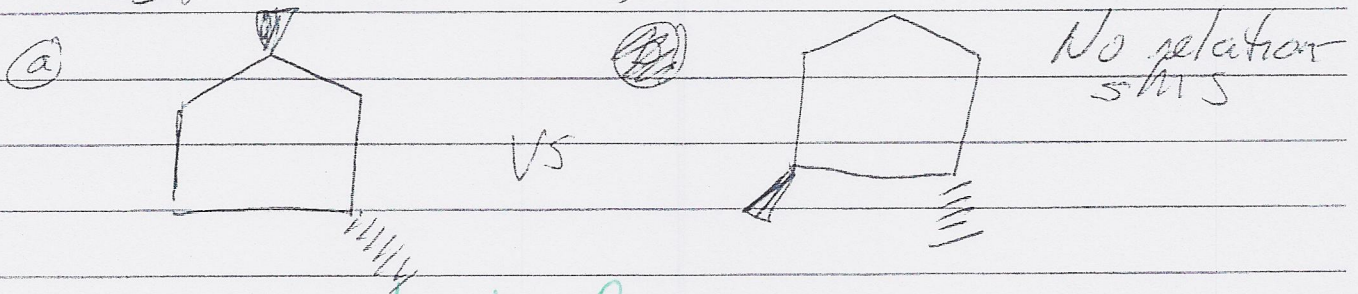
$$\begin{array}{c}
 \text{VII} \text{ } \bar{\omega} \quad \text{VIII} \\
 \text{VIII} \text{ } \bar{\omega} \quad \text{"}
 \end{array}$$

III

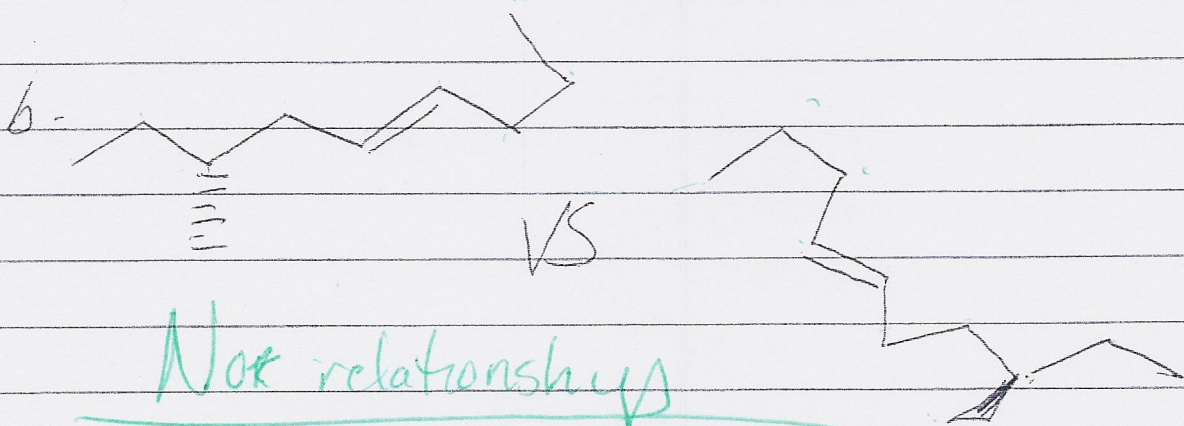


Assign absolute configuration

2. Establish relationships - SAME, ENANTIOMERS, diastereomers, structural isomers



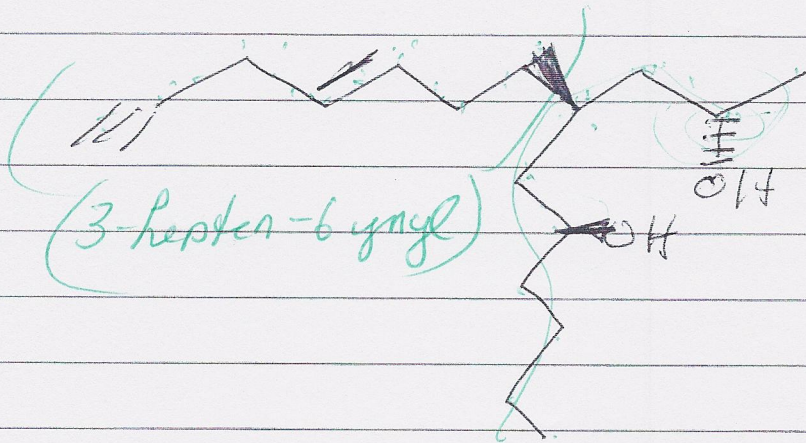
structural isomers
(different connectivity)
different IUPAC



No relationship

Different # carbons

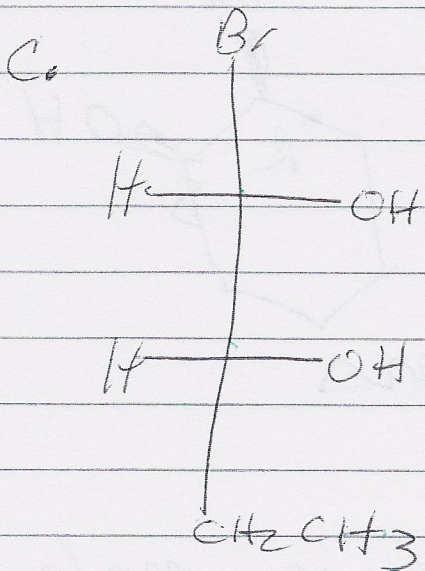
5. Fully name



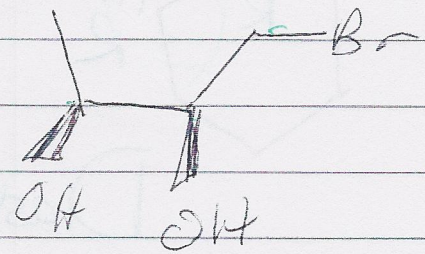
~~heptane~~

~~2,6-decanediol~~

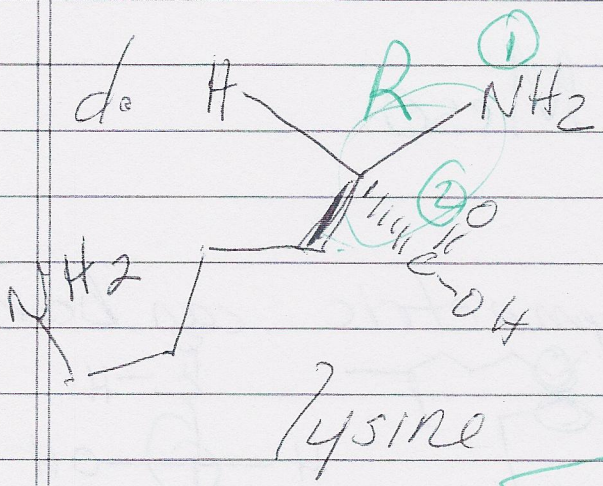
25,45,65 - 4-(3E-hepten-6-ynyl) - 2,6-decanediol
3E



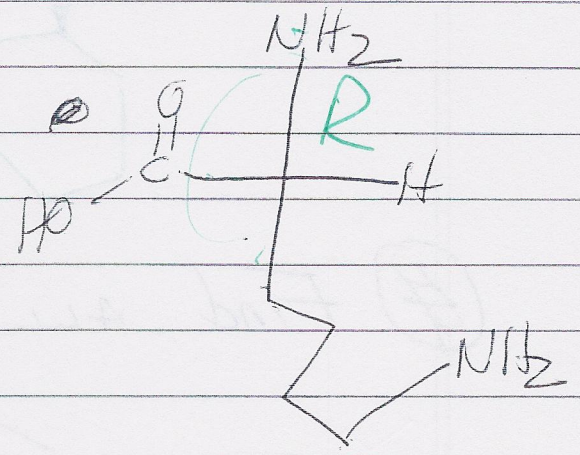
VS



Structural isomers
 diff. connectivity
 diff. IUPAC

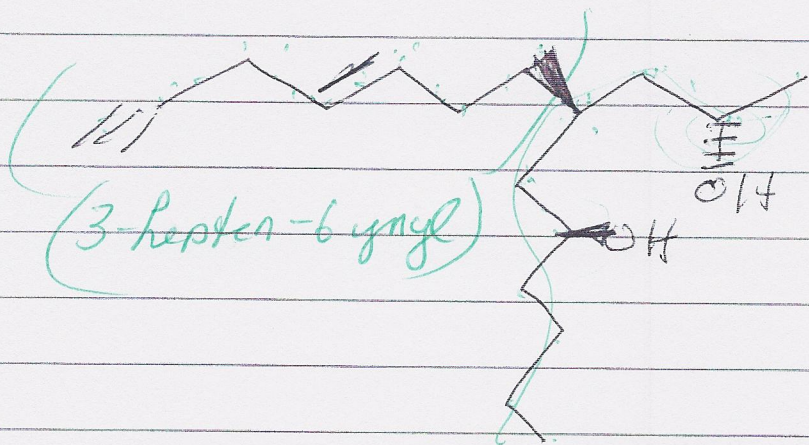


VS



Same Molecule

5. Fully name



~~heptane~~

2,6-decanediol

25,45,65 - 4-(3^E-hepten-6-ynyl) - 2,6-decanediol
3^E