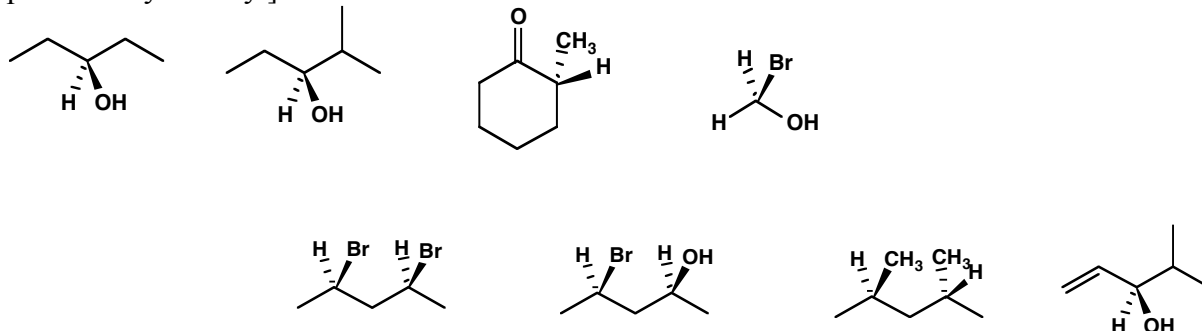


Chapter 5 Quiz, Chem 350,

Due on

1. For each structure, a) star any chiral carbons, b) label each chiral carbon as (R) or (S) and c) indicate any molecules that are chiral. [Two tools for assigning chirality: chiral carbons and planes of symmetry.]

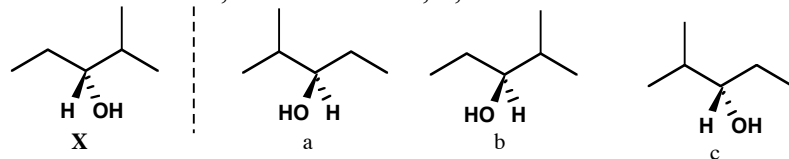


2. Draw the structure for:

a. (R)-3-methylheptane

b. (S)-2-bromopentane

3. Relative to **X**, label each of a, b, and c as an enantiomer to X or as the same as X.



4. Draw all possible stereoisomers of 1,3-dichlorocyclopentane, and label each structure as **A**, **B** etc. a) Label all chiral C's, b) write "chiral" by chiral isomers, c) write "meso" if appropriate, and d) Classify the relationship between any two structures, for example **A/B enantiomers**, or **A/B diastereomers**, etc.. (For any that are the same, scratch out the duplicate!)

5. Alkenes react with HBr. For example, when $\text{CH}_2=\text{CHCH}_2\text{CH}_3$ reacts with HBr, the product is 2-bromobutane. Q: Is the product chiral? Will a solution of the product be optically active or racemic? Will the (S) isomer only, the (R) isomer only, or both isomers form?