Problems CH-5

(1) Which of the following substances contain stereogenic centers?

a. 2,2-dibromobutane b. 3-methylcyclopentene d. 2,3-dimethylheptane e. methylcyclobutane

(2) Draw a structural formula for an optically active compound with the molecular formula:

a. $C_5H_{11}Br$ b. $C_4H_8Cl_2$

(3) Place the members of the following groups in order of decreasing priority according to the R-S convention:

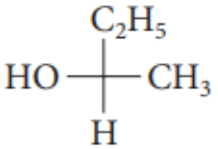
a. CH_3-, H-, C_6H_5-, CH_3CH_2- b. CH_3CH_2-, $CH_3CH_2CH_2$-, CH_2=CH-, O=CH- c. CH_3CH_2-, $HOCH_2$-, H-, Br-

(4) Assume that the four groups in each part of Problem (3) are attached to one carbon atom.

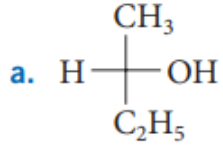
a. Draw a three-dimensional formula for the *R* configuration of the molecule in (3) a.

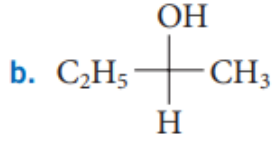
b. Draw a three-dimensional formula for the *S* configuration of the molecule in (3) c.

(5) Which of the following Fischer projection formulas have the same configuration as A, and which are the enantiomer of A?



A

a.


b.


c.
