Week 7 Worksheet

1. For each of the following structures:
   a. Star any stereocenter or chiral carbon atoms.
   b. Label each stereocenter as (R) or (S).

   - D stands for Deuterium, an isotope of Hydrogen with a Neutron.

2. For each pair of structures, indicate whether they are enantiomers or identical compounds.
3. Draw the 3-D dash-wedge structure for each of the following compounds.

(2R,3S)-2-bromo-3-chloropentane

(3R,5S)-3,5-dimethyloctane

(S)-2,2,3-trimethylpentane

4. The sample mixture of a + and - enantiomeric compound has a observed rotation ([α]20D) of -60°. The S enantiomer's specific rotation ([α]20D) is +260°. What is the ee% of the sample mixture? How much of each enantiomer is in the mixture? What is the observed rotation ([α]20D) if the ee% is 80% for a mixture with excess R enantiomer?