Polarimetry, D/L, and ee calculations

1. Define the following terms.
    a. Optically active
    b. Polarimetry
    c. Plane polarized light
    d. Observed rotation
    e. Dextrorotatory
    f. Levorotatory
    g. Specific rotation
    h. Racemic mixture
    i. Optical purity
    j. Enantiomeric excess (ee)

2. Why is the specific rotation of a racemic mixture zero degrees? Is the racemic mixture optically active or inactive?

3. If a mixture consists of 75% of the R enantiomer and 25% of the S enantiomer, what is the enantiomeric excess (ee) of the R enantiomer?