6. (15 pts) Draw a stereochemically correct **NEWMAN** and **PERSPECTIVE** of (2S,3R)-3-phenyl-2-butyl tosylate in the conformation necessary for E2 reaction, and draw a stereochemically correct representation of the **major E2** product. Product formula: C₁₀H₁₂

<table>
<thead>
<tr>
<th>NEWMAN</th>
<th>PERSPECTIVE</th>
<th>PRODUCT</th>
</tr>
</thead>
</table>

7. (10 pts) Identify the compound (or compounds) that have the properties described below.

![Chemical Structures](image)

(a) Is chiral: ____________________
(b) Is meso: ____________________
(c) Has at least one diastereomer: ____________________
(d) Has three different peaks in the proton NMR and two different peaks in the carbon spectrum: ____________________
(e) Has four different peaks in the carbon NMR: ____________________

8. (10 pts) (a) **Clearly** assign configurations to the stereocenters in the molecule below and (b) draw the equivalent chair form.

![Chemical Structure](image)

assignments: ____________________