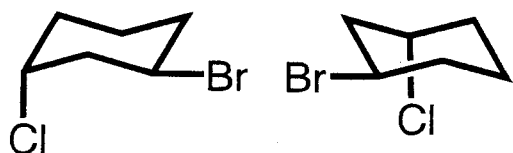


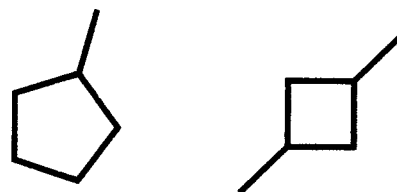
Problem Set III - KEY -

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Sections C, D, E
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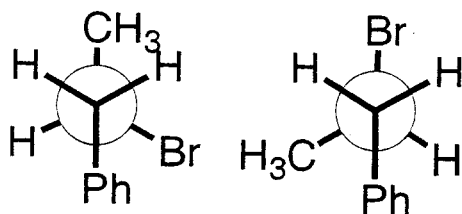
1. Identify each pair as STRUCTURAL, CONFORMATIONAL, SAME, or UNRELATED structures.



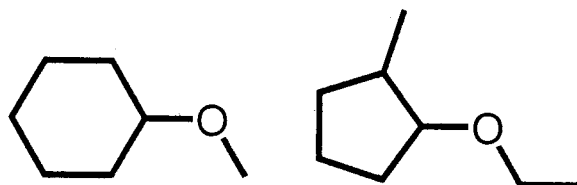
Same



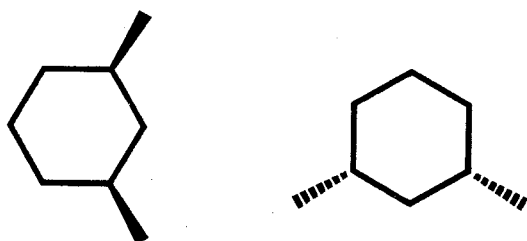
Structural



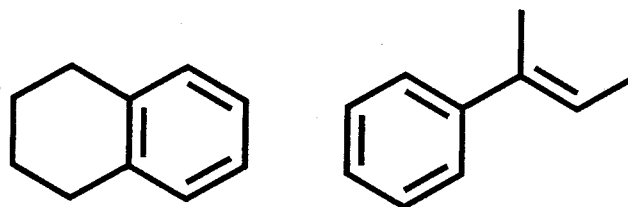
conformational



unrelated

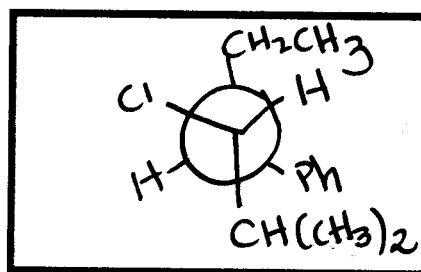
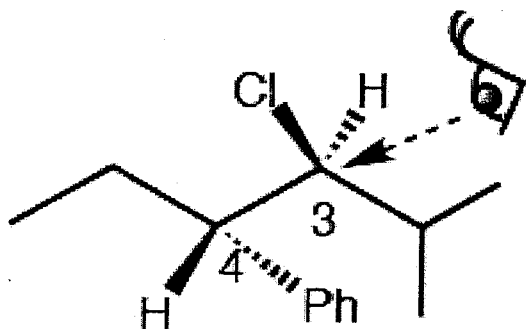
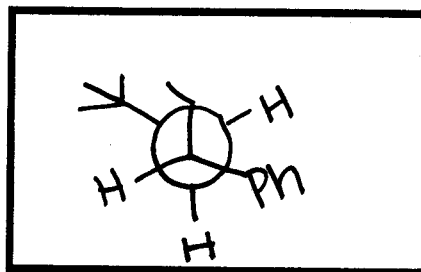
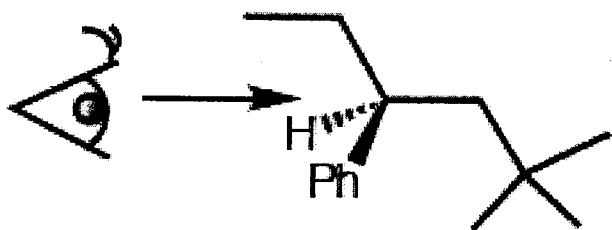


same

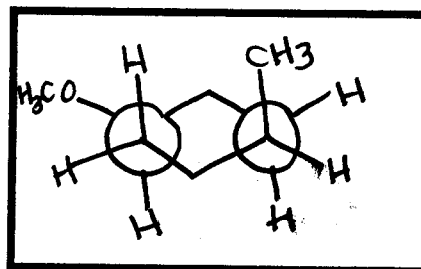
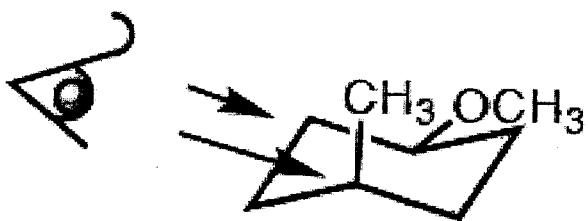
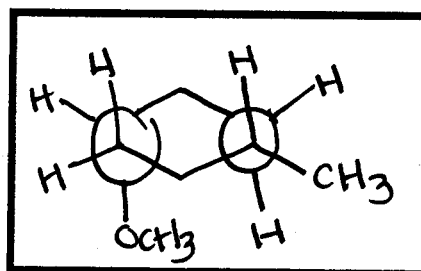
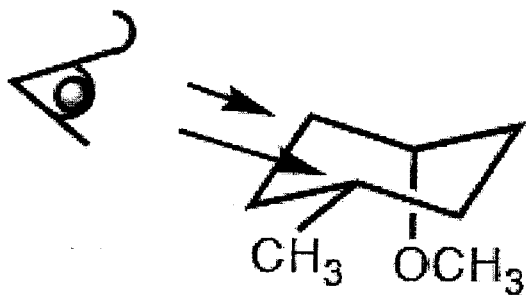


structural

2. Draw a Newman projection of the most stable staggered conformation of the structure below from the viewpoint of the eye (i.e., View down the bond indicated by the arrow.)

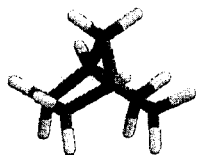


Draw the double Newman projection down the bonds indicated by the arrows.



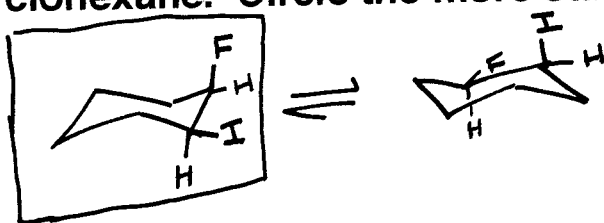
3. Chair conformations

(a) Identify the conformation adopted by the six-membered ring in norbornane.

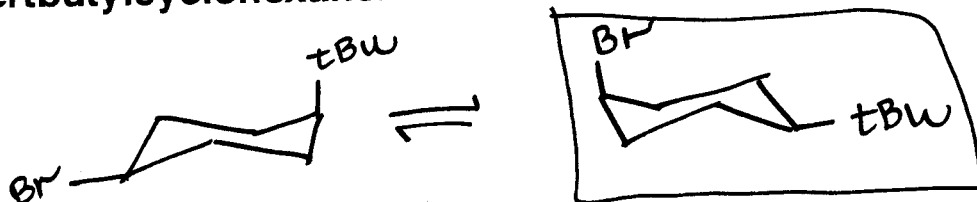


boat

(b) Draw both chair conformations of *cis*-1-fluoro-2-iodocyclohexane. Circle the more stable conformation.



(c) Draw both chair conformations of *cis*-1-bromo-4-tertbutylcyclohexane. Circle the more stable conformation.



(d) Draw both chair conformations of the structure below. Circle the more stable conformation.

