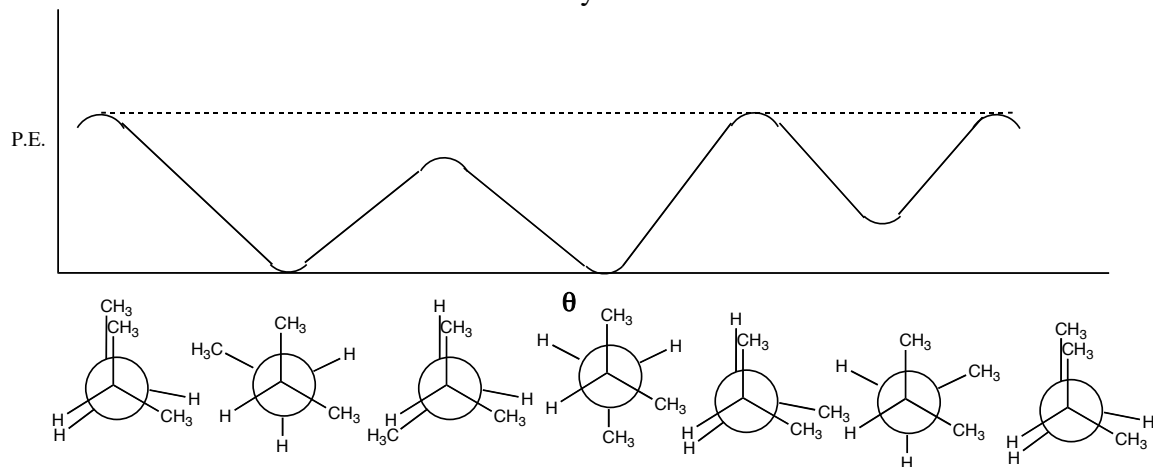


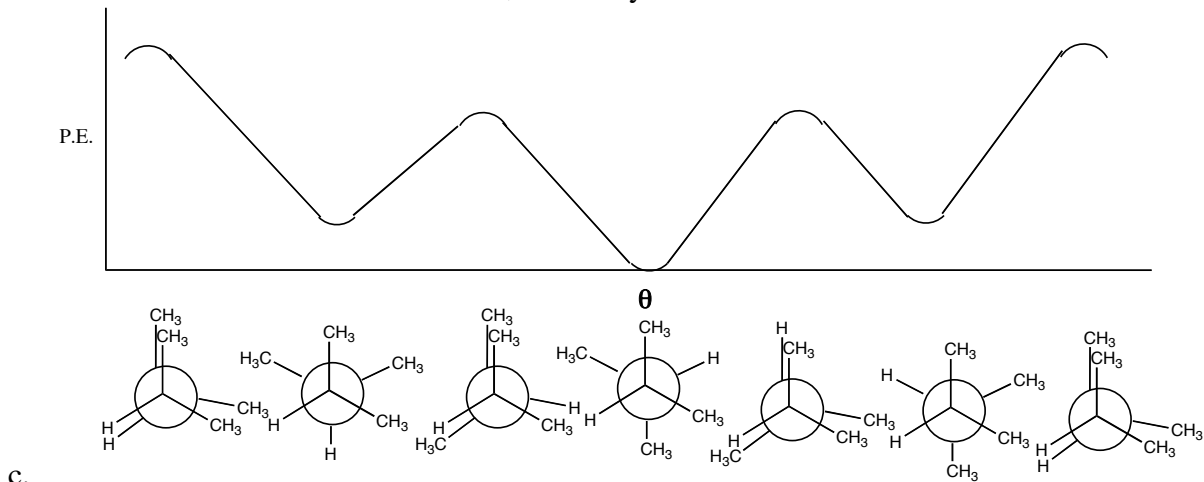
Additional Problems for practice:

1. Draw a graph of potential energy versus dihedral angle for each of the following rotations. Draw a Newman projection for each staggered and eclipsed conformation.

a. rotation about the C2-C3 bond of 2-methylbutane

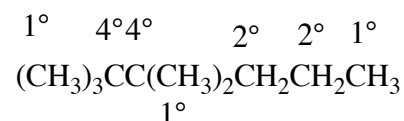
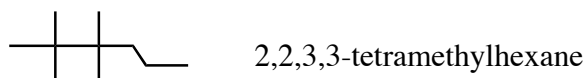
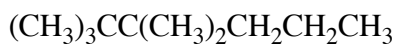
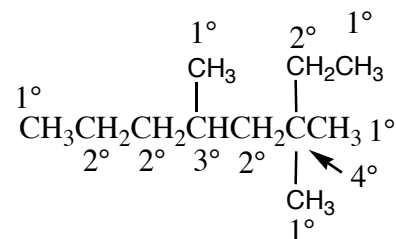
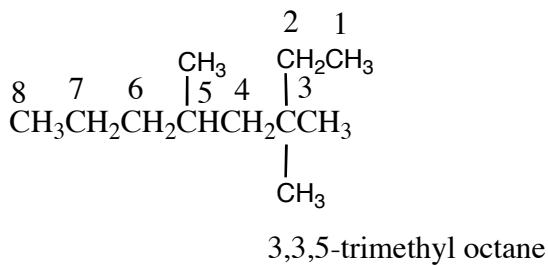
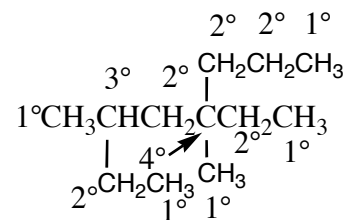
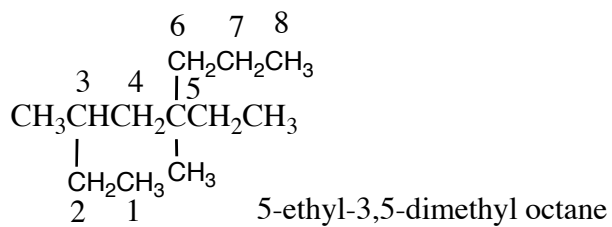


b. rotation about the C2-C3 bond of 2,3-dimethylbutane



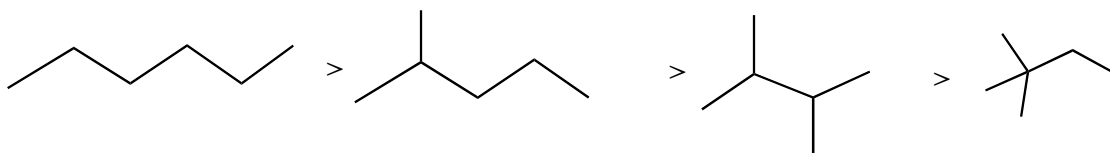
c.

2. Supply proper IUPAC names for the following compounds. Indicate the degree of substitution at each carbon ( $1^\circ$ ,  $2^\circ$ ,  $3^\circ$ ,  $4^\circ$ )



3. Order the following compounds with respect to their boiling points, from least to greatest. Do the same for their melting points.

Boiling points: Surface area



Melting points: Compactness

