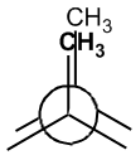
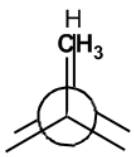
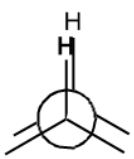
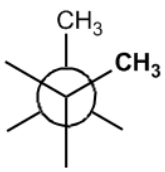
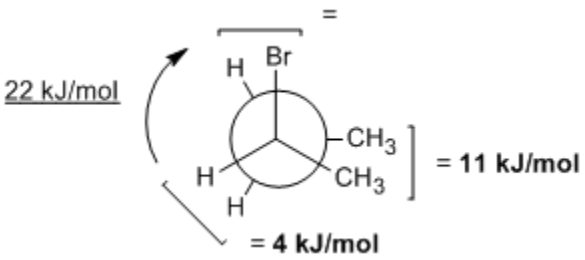
CONCEPT: CALCULATING CONFORMATIONAL ENERGY

□ Sometimes we'll be asked to calculate the energy barrier (kJ/mol) of rotation or of a specific interaction.

- *Barrier to rotation* can be calculated by memorizing other known values.

11 kJ/mol	6 kJ/mol	4 kJ/mol	3.8 kJ/mol
			
CH_3/CH_3 Eclipsed	CH_3/H Eclipsed	H/H Eclipsed	CH_3/CH_3 Gauche

EXAMPLE: The barrier to rotation for the following molecule is 22 kJ/mol . Determine the energy cost associated with the eclipsing interaction between a bromine and hydrogen atom.



PRACTICE: The barrier to rotation for 1,2-dibromopropane along the C1—C2 bond is 28 kJ/mol. Determine the energy cost associated with the eclipsing dibromine interaction.