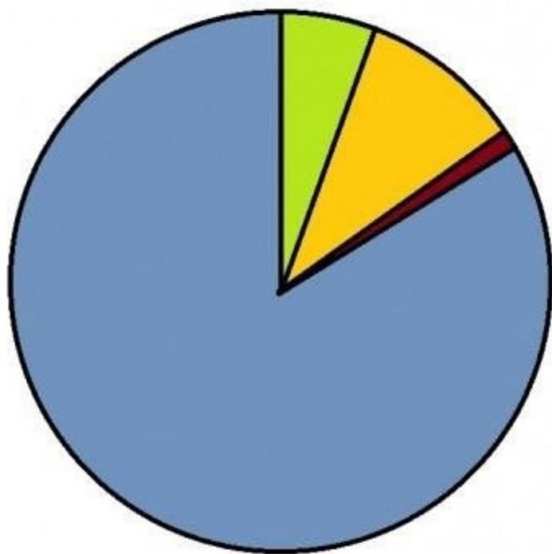
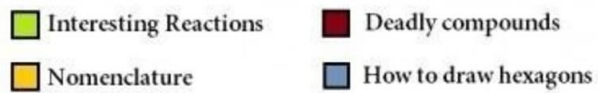


Nov 11-15 Practice Problems

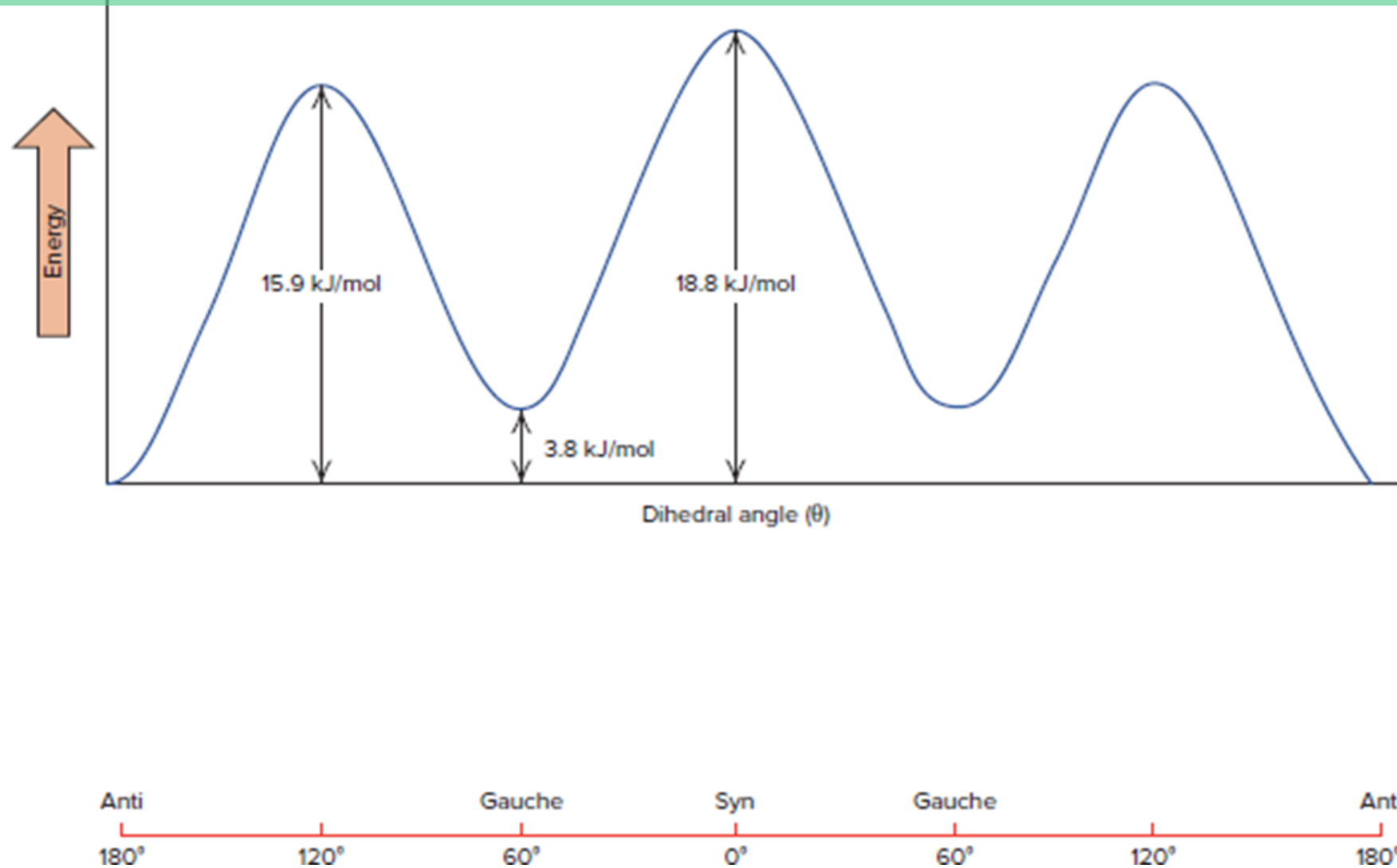
Things I learned in Organic Chemistry



Due dates:

- Quiz 7 due Friday November 15th (on last week's content)
- Review 7 this week as normal
- Office hours: Tuesday 5:30 to 6:30pm PP104

Q1: Fill in all the associated Newman projections for butane. Ensure the correct projection matches with the associated potential energy. Draw the most stable conformation as a sawhorse diagram.

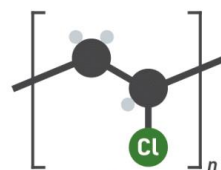


Q2: Circle and name the functional groups in these molecules. Specify primary, unsubstituted, etc. Note all the grey circles are carbon.

The plastic anatomy of a Barbie doll

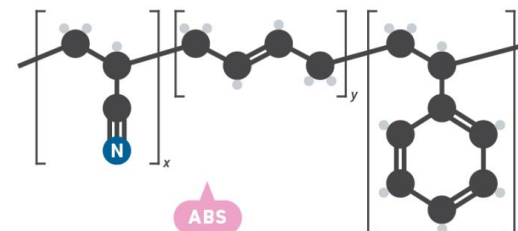


Head and hair



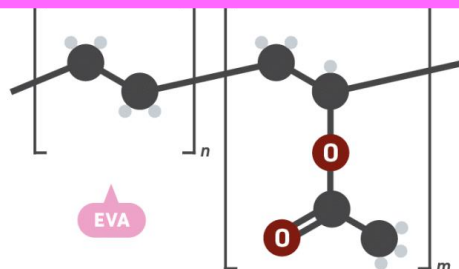
PVC

Torso



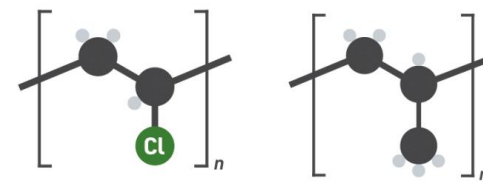
ABS

Arms

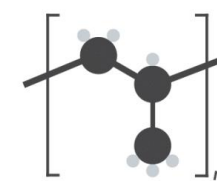


EVA

Legs



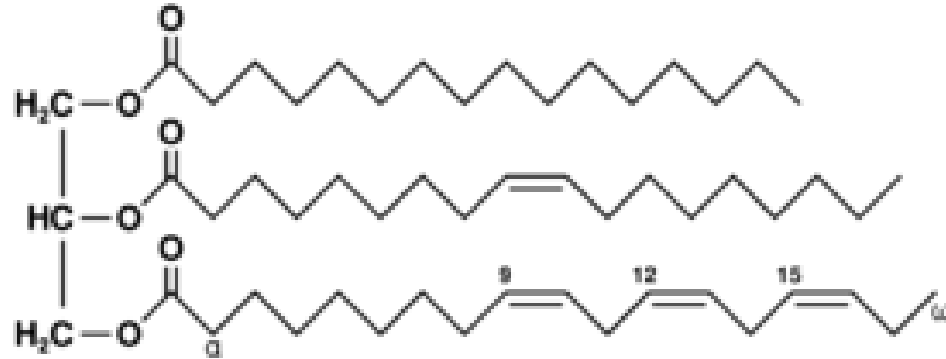
PVC



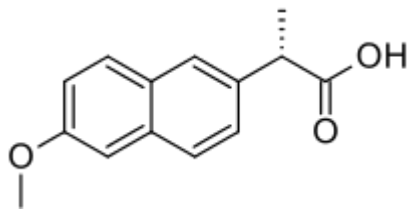
PP

KEY: ● Carbon ○ Oxygen ● Nitrogen ● Hydrogen

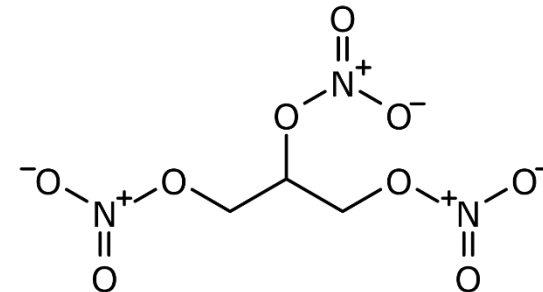
Q3: Circle and name the functional groups in these molecules. Specify primary, unsubstituted, etc.



triglyceride



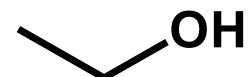
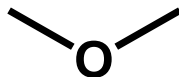
Naproxen (Brand name Aleve)



nitroglycerin

Q4: Fill in the following for the pair of molecules. What kind of isomers are they?

Skeleton:



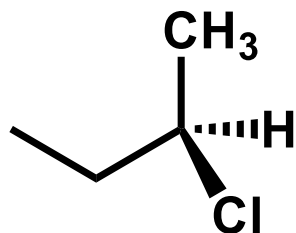
Molecular formula:

Q5: Draw a corresponding isomer (as indicated) for each molecule below.

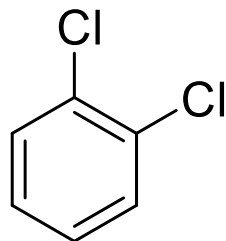
Skeletal:



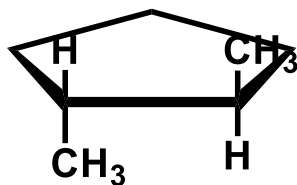
Enantiomer:



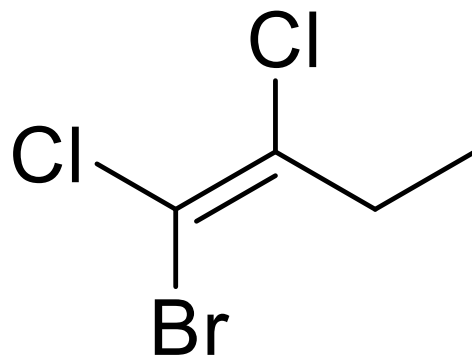
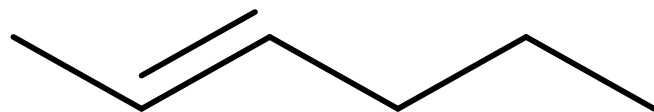
Positional:



Geometric:



Q6: Name the following molecules using cis/trans or E/Z.



Q7: Decide whether the bromoalkanes (a) $\text{CH}_3\text{CH}_2\text{CHBrCH}_3$ and (b) $\text{CH}_3\text{CHBrCH}_3$ are chiral.

Q8: Indicate if the following molecules are R or S. Show your work!

