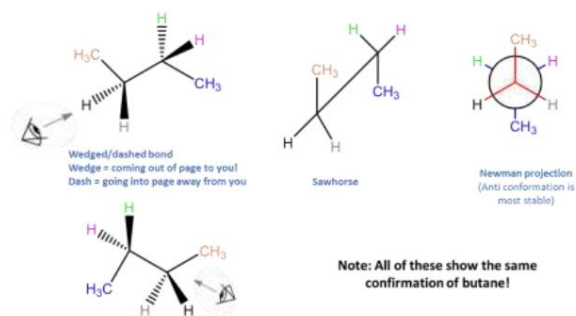


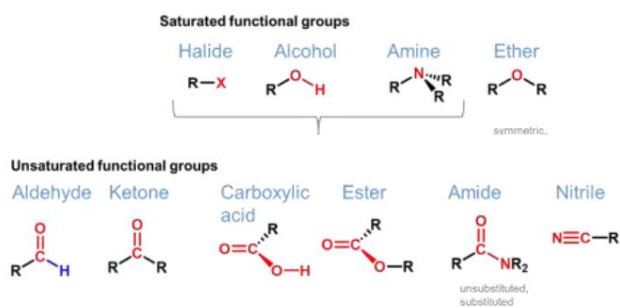
In class review (November 14 and 15)

Major Concepts Covered

Conformation, sawhorse, Newman projects



Functional Groups

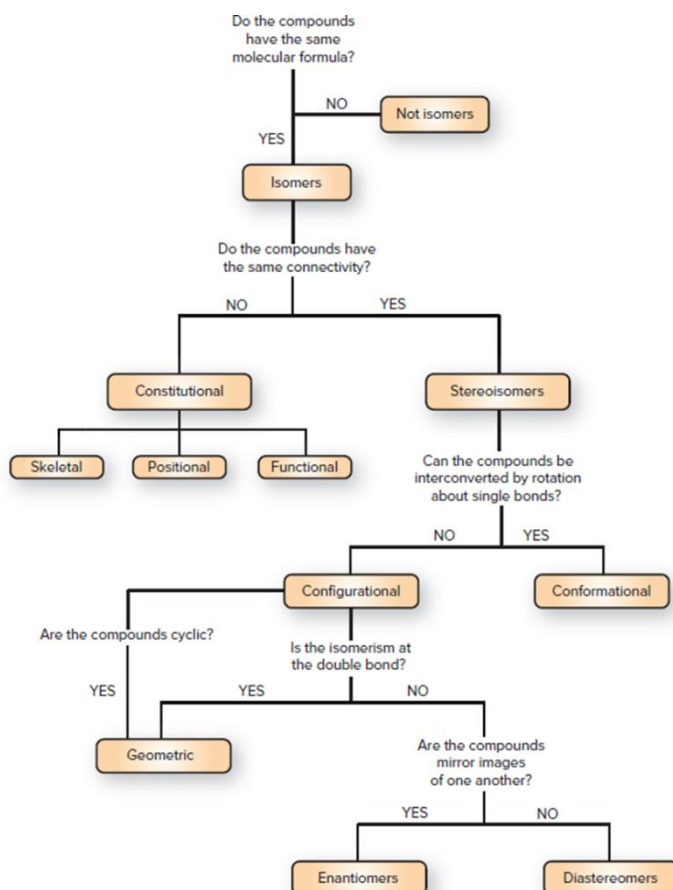
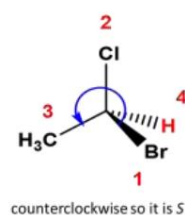


Chirality and R, S (absolute) configuration

Chiral carbons (chiral centres): have 4 different substituents!

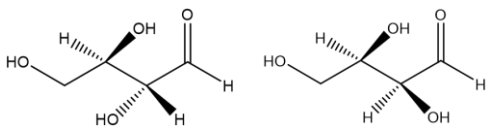
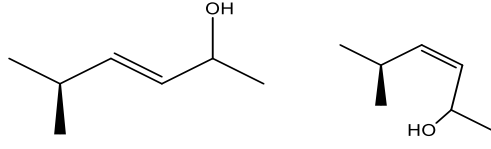
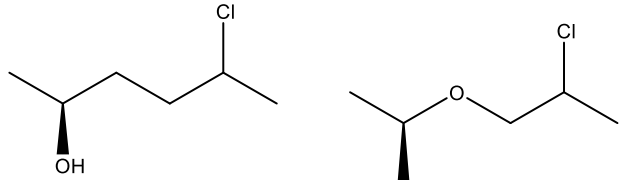
R, S, absolute configuration: only for chiral centres:

1. Assign priority (1: highest to 4: lowest) to all substituents to the chiral center based on atomic number
 2. Point the lowest priority substituent to the back
 3. Draw a curved arrow to show decreasing order of priority (from 1 to 3)- ignore the lowest priority substituent
- "R": If the curved arrow is drawn clockwise
 "S": If the curved arrow is drawn counter-clockwise

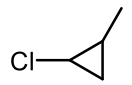
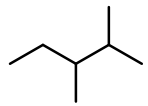
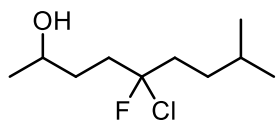


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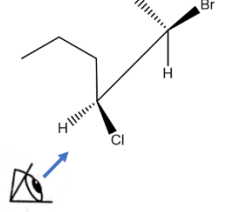
Question 1. Indicate which type of isomers are represented by the pairs. Note: only the precise type must be indicated, the general category (e.g., stereoisomers, constructional isomers, will not suffice here.

Question 2. Circle all the chiral centres in the structures below.

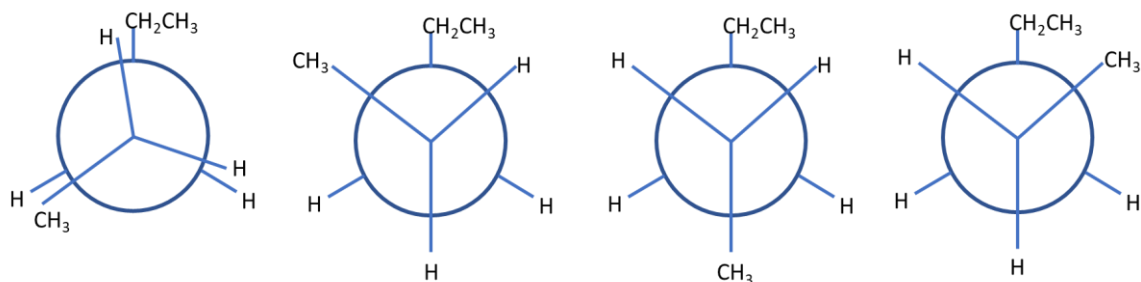
		
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Question 3. Draw the Newman projection of the molecules below, from the perspective indicated.

In class review (November 14 and 15)

Question 4. Which of these conformations is most stable and why.



Question 5. Circle and name the type of functional groups in each compound below. Specify if each is primary, secondary, substituted, etc.

 glyphosate (an herbicide)	 acetaminophen (Tylenol)	 hydrocodone
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Question 6. Use the wedge and dashed lines to re-draw the following molecules as either *R* vs *S* as indicated. Be sure to include the priority numbers 1-4.

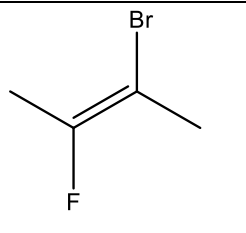
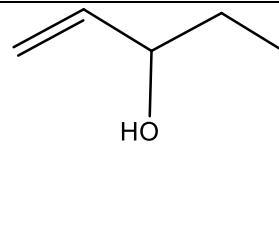
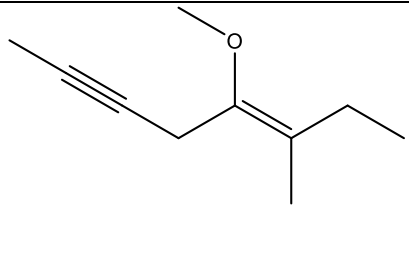
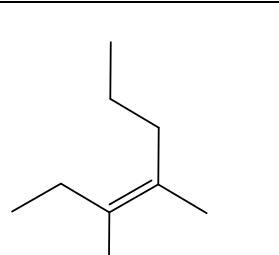
 <i>R</i>	 <i>S</i>	 <i>S</i>
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In class review (November 14 and 15)

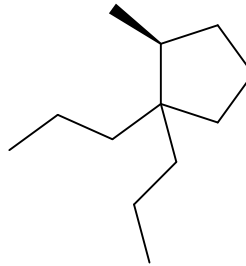
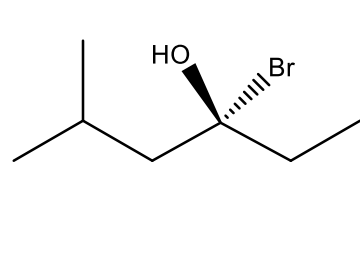
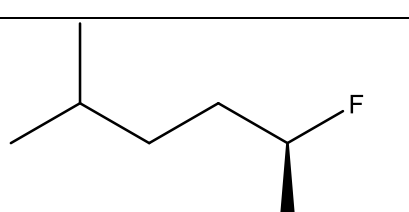
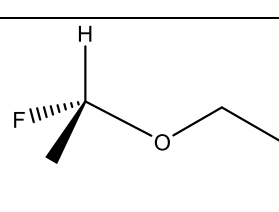
Question 7. Draw these structures using skeletal diagrams.

(R)-3-bromo-3-methylhexane	(E)-2-methylhex-3-ene
(Z)-1-chlorobut-2-ene	(R)-4-fluoropent-1-ene

Question 8. Indicate if these structures are cis/trans AND E/Z

Question 9. Determine the configuration (R vs S).

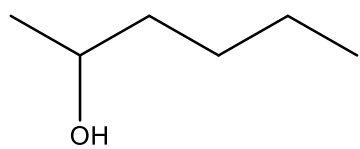
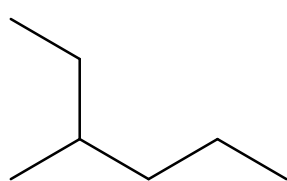
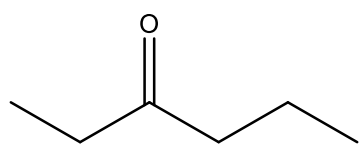
	
	

In class review (November 14 and 15)

Question 10. Draw one example each of a structure containing the indicated functional groups.

Secondary amine	Unsubstituted amide
Carboxylic acid	Ester

Question 11. Draw (using skeletal structures) the indicated isomer of these molecules.

Positional 	
Skeletal 	
Functional 	

Question 12. What is the difference between conformation and configuration?