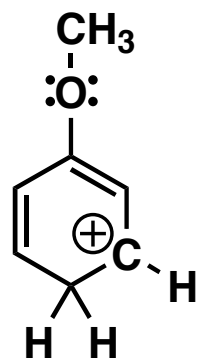


Discussion Problem

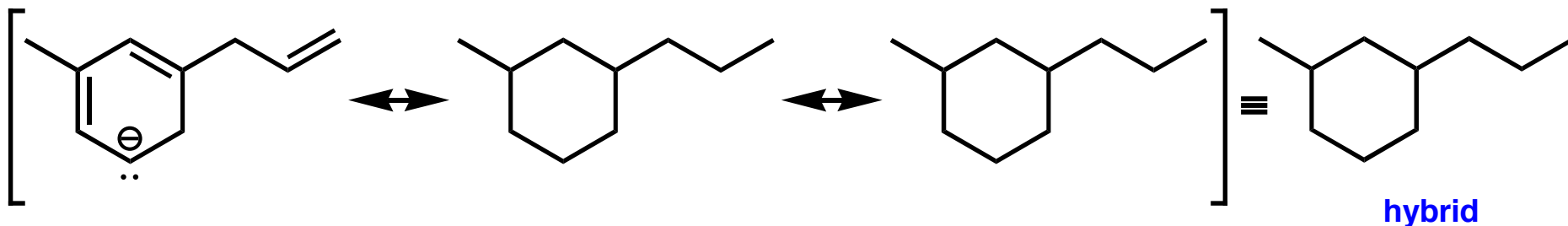


- Draw a resonance contributor such that every atom has an octet of electrons
- Draw curved arrows to show the changes in electron configuration
- Analyze the building block changes using the table at the right.

number of domains					
four	three	two	one	zero	
Formal Charge = 0					
hydrogen				-H	
carbon	$\begin{array}{c} \\ -\text{C}- \\ \end{array}$	$\begin{array}{c} \diagup \\ \text{C} \\ \diagdown \\ \end{array}$	$-\text{C}\equiv$ $=\text{C}=\mathbf{}$		
nitrogen	$\begin{array}{c} \cdot\cdot \\ -\text{N}- \\ \end{array}$	$\begin{array}{c} \diagup \\ \text{N} \\ \diagdown \\ \\ \cdot\cdot \end{array}$	$\cdot\cdot\text{N}\equiv$		
oxygen	$\begin{array}{c} \cdot\cdot \\ -\text{O}- \\ \end{array}$	$\begin{array}{c} \cdot\cdot \\ \text{O} \\ \\ \cdot\cdot \end{array}$			
fluorine	$\begin{array}{c} \cdot\cdot \\ -\text{F}: \\ \cdot\cdot \end{array}$				
Formal Charge = +1					
hydrogen					H^{\oplus}
carbon		$\begin{array}{c} \\ -\text{C}^{\oplus} \\ \end{array}$	$-\text{C}^{\oplus}=\mathbf{}$		
nitrogen	$\begin{array}{c} \\ -\text{N}^{\oplus} \\ \end{array}$	$\begin{array}{c} \diagup \\ \text{N}^{\oplus} \\ \diagdown \\ \end{array}$	$-\text{N}^{\oplus}\equiv$ $=\text{N}^{\oplus}=\mathbf{}$		
oxygen	$\begin{array}{c} \\ -\text{O}^{\oplus} \\ \end{array}$	$\begin{array}{c} \diagup \\ \text{O}^{\oplus} \\ \diagdown \\ \end{array}$	$\cdot\cdot\text{O}^{\oplus}\equiv$		
fluorine	$\begin{array}{c} \cdot\cdot \\ -\text{F}^{\oplus} \\ \cdot\cdot \end{array}$	$\begin{array}{c} \cdot\cdot \\ \text{F}^{\oplus} \\ \cdot\cdot \end{array}$			

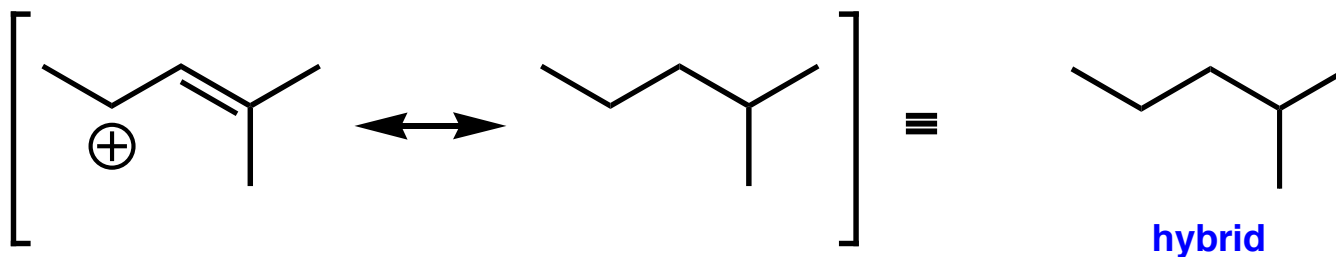
Discussion Problems

Localized and Delocalized Electrons



<http://wps.prenhall.com/wps/media/objects/724/742158/0027f.html>

Drawing Resonance Contributors



<http://wps.prenhall.com/wps/media/objects/724/742158/0025f.html>

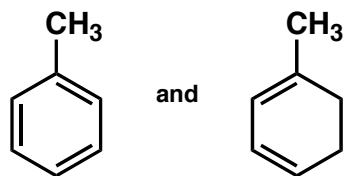
Discussion Problems

(1) Which of these is a pair of resonance structures?

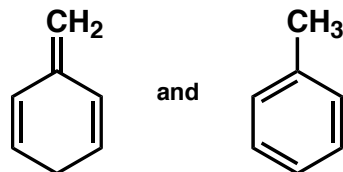
-

A
B
C
D
E

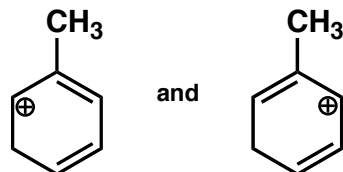
A)



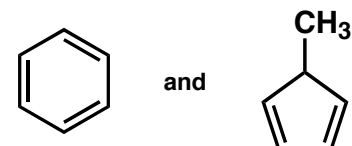
B)



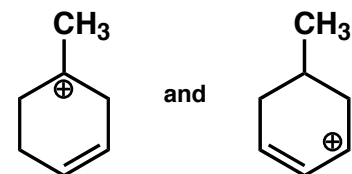
C)



D)



E)



(2) Which drawing best represents the resonance hybrid of resonance contributor **1**.

-

A
B
C
D
E

