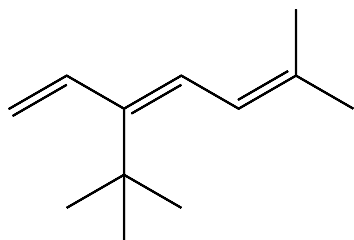
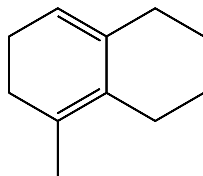


Homework 3

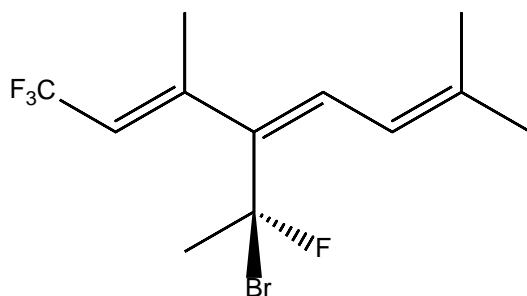
Rubush

1. Provide the IUPAC name for the following molecules.

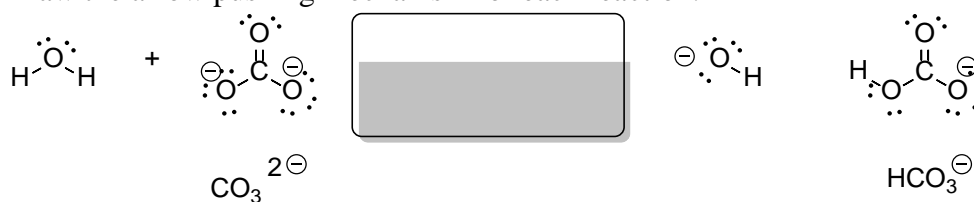
2.



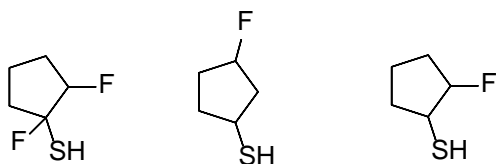
How many possible stereoisomers could the following molecule have?



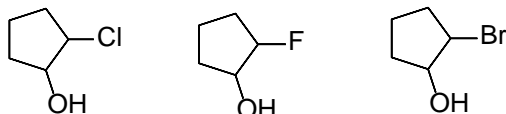
1. Label the Acid, Base, Conjugate Acid and Conjugate Base in the Acid/Base reaction
2. Determine the pK_{eq} and draw the appropriate arrows between the reactants and products.
3. Draw the arrow pushing mechanism for each reaction.



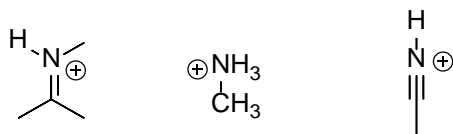
4. Rank the following molecules based on acidity. #1 is most acidic and #3 is least acidic. Explain your reasoning.



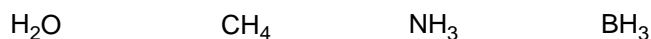
5. Rank the following molecules in order of increasing acidity. Which of the following has the weakest conjugate base and explain why?



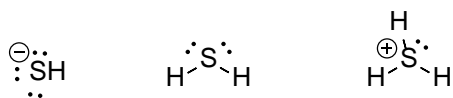
6. Rank the following molecules in order of increasing acidity. Which molecule has the least stable conjugate base explain why.



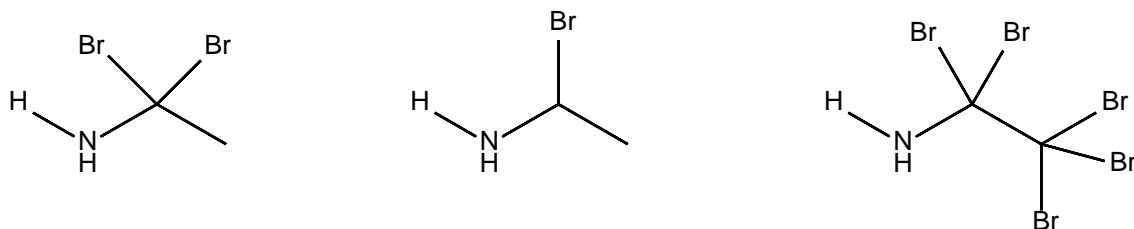
7. Rank the following molecules in order of increasing acidity? Which one has the most stable conjugate base and why?



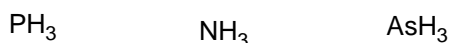
8. Rank the following molecules in order of increasing acidity. Which conjugate base is the strongest? Explain why.



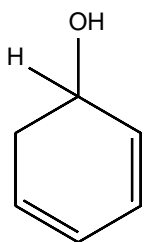
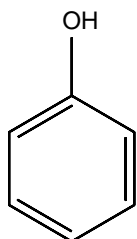
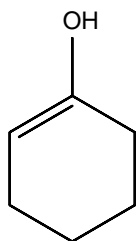
9. Rank the following molecules in order of increasing acidity?



10. Rank the following acids in order of increasing acidity. Which of the following is the strongest acid and explain why?



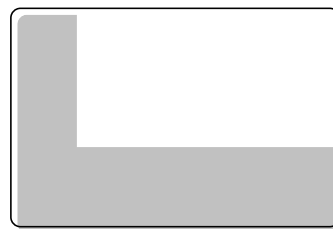
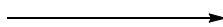
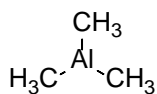
11. Rank the following molecules in order of increasing acidity? Explain your reasoning by drawing resonance structures.



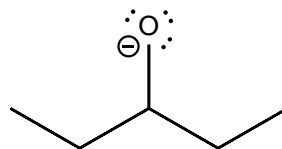
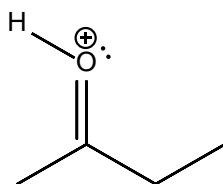
12. Label the Lewis acid and Lewis base. Draw the arrow pushing mechanism and the product of the reaction.



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13. Label the following as a Nucleophile or an Electrophile and explain why.



14. Draw the reaction mechanism and final product for the following reaction. Chapter 6

