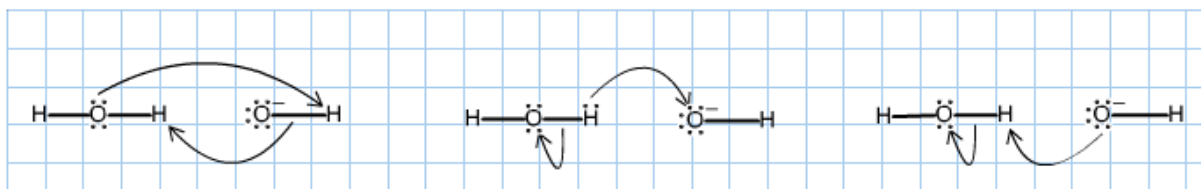


Which of the following diagrams correctly shows how a deprotonation during an acid/base reaction occurs?



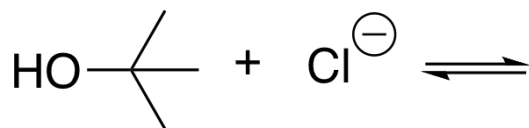
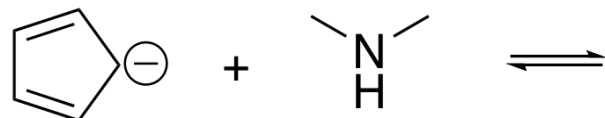
A

B

C

<input type="radio"/>	A
<input type="radio"/>	B
<input type="radio"/>	C

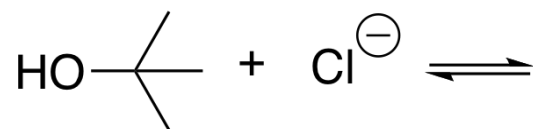
Predict products and label the components of the acid-base reaction.



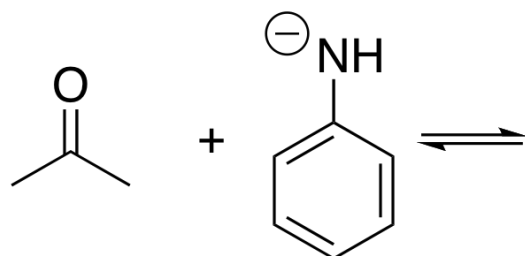
Are products or reactants favored?

- a. products
- b. reactants
- c. neither

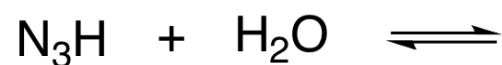
1.



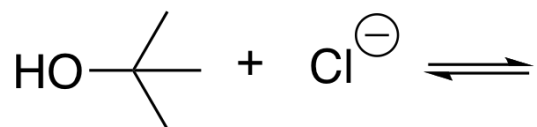
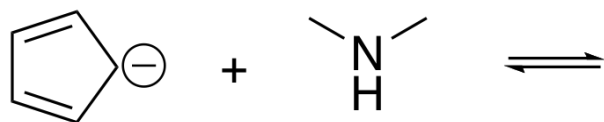
2.



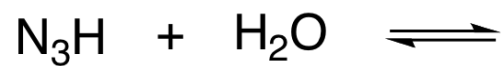
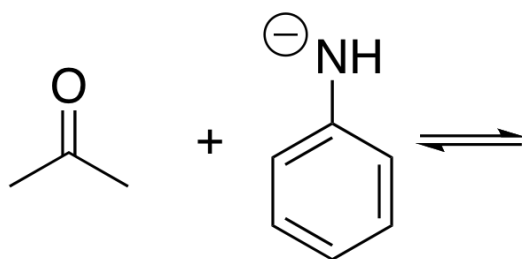
3.



Draw curved arrows for the acid-base reaction.



Draw curved arrows for the acid-base reaction.



Is this true? Why or Why not?* Use examples to back up your claims.

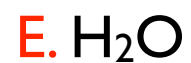
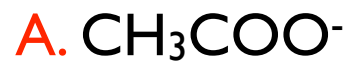
- All Lewis acids are also Brønsted-Lowry acids.

*If not, how would you rewrite it?

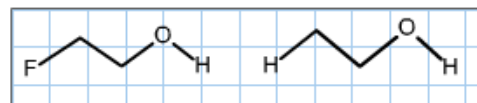
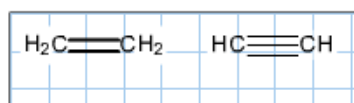
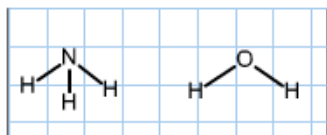
Choose the strongest acid.

- a. CH_3COOH
- b. ClCH_2COOH
- c. $\text{CH}_3\text{CH}_2\text{OH}$
- d. $\text{ClCH}_2\text{CH}_2\text{OH}$
- e. equal strength

Choose the strongest base.



For each pair of molecules below, select the primary factor you would use to explain why one is more acidic than the other.



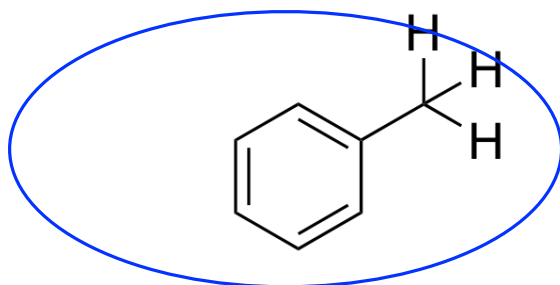
- Resonance Effect
- Inductive Effect
- Hybridization Effect
- Element Effect

- Resonance Effect
- Inductive Effect
- Hybridization Effect
- Element Effect

- Resonance Effect
- Inductive Effect
- Hybridization Effect
- Element Effect

A student answered this question as follows. Is the student's answer correct or incorrect? Why?

Q: Choose the compound with the most acid proton and explain your choice.



The compound circled has the most acidic proton because it has resonance stabilization.

- a. all correct
- b. correct compound, incorrect explanation
- c. incorrect compound, correct explanation
- d. all incorrect
- e. Help! I'm lost.

Acidity/Basicity Summary

Summarize how to compare relative acidity or basicity of compounds based on structure.

Acid

Base

Effect Summary

Summarize each effect used to compare relative acidity or basicity of compounds based on structure.

Specifically, explain the difference between element effect and inductive effect. Use examples.

Challenge Question

1. What type of reaction is this?
2. Draw the missing product.
3. Use curved arrows to draw a mechanism for formation of Product B.
4. A student predicts the ratio of A:B in the product mixture will be 2:1. Explain this prediction.

