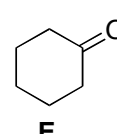
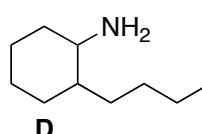
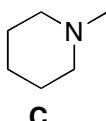
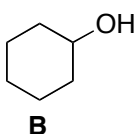
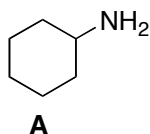
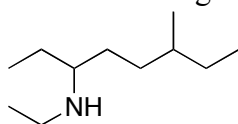


1. Solubility/Boiling point problem. Which of the following statements is **false**?
- The water solubility of **A** is greater than for **B**, because amines are more basic and thus hydrogen bond better with water.
 - The boiling point of **B** is greater than for **A**, because alcohols are more acidic and thus hydrogen bond better with themselves.
 - The relative boiling points should be $D > A > C$
 - The relative water solubilities should be $D > A > C$
 - Structures **C** and **E** can hydrogen bond to water, but neither can hydrogen-bond to itself

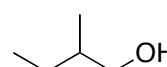
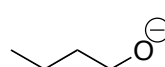
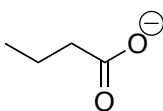
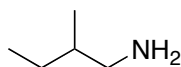
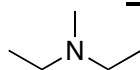


2. Name the following:



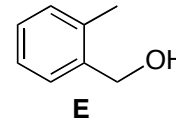
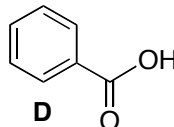
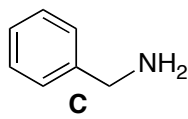
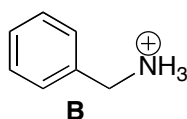
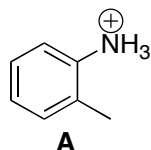
3. Draw the structure for 3-aminocyclohexanone

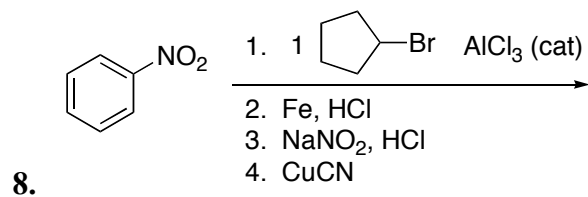
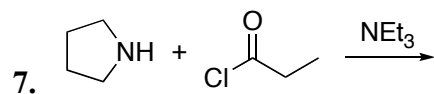
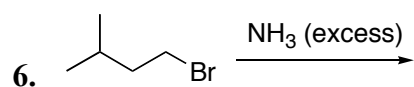
4. Rank the **basicity** of the following from 1 to 5, 1 being highest.



5. Which of the following statements is **false** regarding the acidities of structures **A-E**:

- In terms of acidity, $A > B > C$
- In terms of acidity, $D > B > E$
- In terms of acidity, $E > B$



Predict the Products for the Following ReactionsDraw the mechanism for the following reactions.