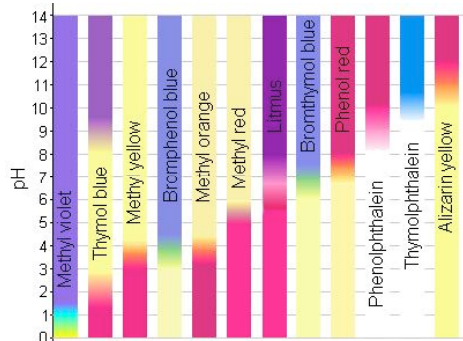


Chemistry 106 Fundamental Chemistry

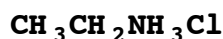
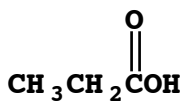


Acids and Bases Practice Problems

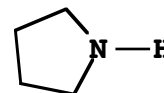
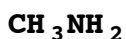
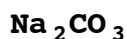
- 1) A DNR limnologist measured the pH of several bodies of water. Report the $[H_3O^+]$ and the pOH for these readings:

pH	$[H_3O^+]$	pOH
6.5		
7.05		
5.8		
8.14		

- 2) Calculate the $[H_3O^+]$ and the pH for each of the following strong acid solutions.
 a) 0.100 M HCl b) 1.00×10^{-4} M HNO₃ c) 2.5×10^{-5} M HI
- 3) Calculate the $[OH^-]$, $[H_3O^+]$ and pH for each of the following strong base solutions.
 a) 0.00500 M NaOH b) 1.00×10^{-3} M CaO c) 6.67×10^{-4} M KOH
- 4) Write down the balanced structural chemical equation for the K_a reactions of the weak acid and weak acid salt shown.



- 5) Write down the balanced structural chemical equation for the K_b reactions of the weak bases and weak base salts shown.



- 6) An aqueous solution is prepared from each substance in (4) and (5) above. For each solution, will the pH be >7 , $=7$ or <7 ?