

Part 10
Homework

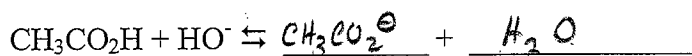
- 1) In an acidic solution, which of the following is true?
 (A) $[H^+] > [OH^-]$ (B) $[H^+] = [OH^-]$ (C) $[H^+] < [OH^-]$
- 2) How about a basic or neutral solution?
 basic $[OH^-] > [H^+]$
 neutral $[H^+] = [OH^-]$
- 3) Which of the following is not a strong acid.
 (A) H_2SO_4 . (B) HCl . (C) HNO_3 (D) CH_3COOH (or $HC_2H_3O_2$) see acidity table
- 4) What does amphoteric mean? Can act as both an acid or a base
- 5) Give two examples of an amphoteric substance. H_2O , HCO_3^- , $H_2PO_4^-$, HPO_4^{2-}
- 6) Give an example of an acidic pH? 1 (anything less than 7)
- 7) Give an example of a basic pH? 12 (anything greater than 7)
- 8) Give an example of a neutral pH? 7
- 9) Please complete the following table. Report all concentrations to at least 3 significant figures. Report pH and pOH to the hundredth's place.

	$[H_3O^+]$ (M)	pH	$[OH^-]$	pOH
0.000100 M NaOH	1.00×10^{-10}	10	0.0001 M or 1.00×10^{-4} M	4
1.00 M lactic acid	1.17×10^{-2}	1.93	8.51×10^{-13}	12.07

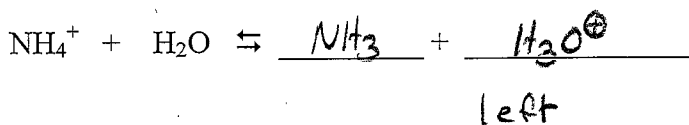
Please complete the following table. The pHs should be reported to the hundredths place and concentrations should be reported to 3 significant figures and in scientific notation where appropriate.

	$[H^+]$ or $[H_3O^+]$	pH	$[OH^-]$	pOH
0.00830 M HCl	0.00830 M	2.08	1.20×10^{-12}	11.92
0.200 M NH_3	5.37×10^{-12}	11.27	1.86×10^{-3}	2.73

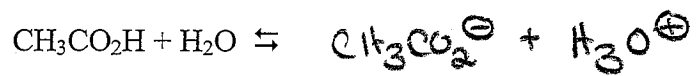
- 10) What are the products of the following reactions?



Which way does the equilibrium lie? right



Which way does the equilibrium lie? (left) from previous page



Equilibrium lies to the right or left? left



Equilibrium lies to the right or left? right