

Topic Reminder Q13  
pH System

1. What chemical is ultimately responsible for a solution being acidic?



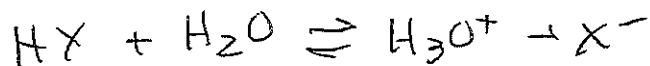
2. Student hypothesis: A highly acidic solution does not contain any hydroxides. Justify or nullify.

$[\text{H}^+] > [\text{OH}^-]$  But Both are present  
go to equilibrium Not completion

3. A solution has a pOH = 4.5. Answer the following questions.

- a. pH =  $14 - 4.5 = 9.5$   
b.  $[\text{H}^+] = 10^{-4.5} = 3.16 \text{ E-}5 \text{ M}$   $\swarrow$   
c.  $[\text{OH}^-] = 10^{-9.5} = 3.16 \text{ E-}10 \text{ M}$   $\searrow$   
d. ~~acidic~~ basic/neutral  
pH = 9.5

4. Write a hydrolysis reaction for HX.



5. What is the conjugate of HX and is it acidic/basic/neutral?

