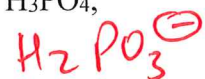


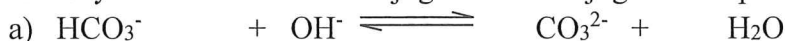
1) Write the conjugate base for the following acids:



2) Write the conjugate acid for the following bases:



3) Identify the acid-base and conjugate acid/conjugate base pair in the following equations.

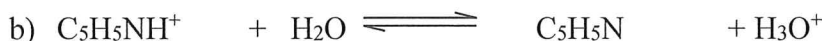


A

B

CB

CA



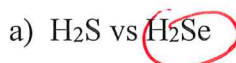
A

B

CB

CA

4) Circle the stronger acid in the following pairs:



5) Calculate the pH, pOH, $[H_3O^+]$ or $[OH^-]$ concentrations as indicated in the problem:

a) pH for 0.65 M HBr

$-\log [0.65] = 0.19$

b) pOH for 0.073 M LiOH

$-\log [OH^-] = -\log [0.073] = 1.14$

c) pH for 0.070 M KOH

$-\log [OH^-] = -\log [0.07] = 1.15 = pOH$
 $pH = 14 - 1.15 = 12.8$

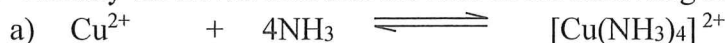
d) $[H_3O^+]$ for lemonade, pH 2.91

antilog 2.91 $1.23 \times 10^{-3} M$

e) $[OH^-]$ for blood plasma, pH 7.42

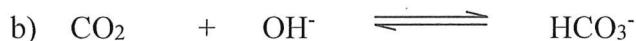
$[OH^-] = 14 - 7.42 = 6.58 \rightarrow$ take antilog $2.63 \times 10^{-7} M$

6) Identify the Lewis acid and the base in the following reactions.



LA

LB



LA

LB