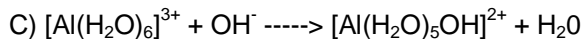
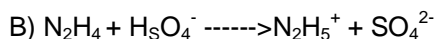
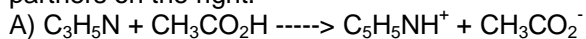


6. Write balanced equations showing how the HPO_4^{2-} ion of sodium hydrogen phosphate, Na_2HPO_4 , can be a Bronsted acid or Bronsted base.

8. In each of the following acid-base reactions, identify the Bronsted acid and base on the left and their conjugate partners on the right.



14. The pH of a solution of $\text{Ba}(\text{OH})_2$ is 10.66 at 25 deg. Celsius. what is the Hydroxide ion concentration in the solution? If the solution volume is 125 ml, how many grams of $\text{Ba}(\text{OH})_2$ must have been dissolved?

42. A .10M solution of chloroacetic acid, $\text{ClCH}_2\text{CO}_2\text{H}$, has a pH of 1.95. Calculate K_a for the acid.

48. The ionization constant of a very weak acid, HA, is 4.0×10^{-9} . Calculate the equilibrium concentration of H_3O^+ , A^- , and HA in a .400 M solution of the acid.

86. The butylammonium ion, $\text{C}_4\text{H}_9\text{NH}_3^+$, has a K_a of 2.3×10^{-11}
 $\text{C}_4\text{H}_9\text{NH}_3^+ + \text{H}_2\text{O} \rightarrow \text{H}_3\text{O}^+ + \text{C}_4\text{H}_9\text{NH}_2$

A) calculate K_b for the conjugate base, $\text{C}_4\text{H}_9\text{NH}_2$

B) What is the pH of .015 M solution of the butylammonium ion?

For answers, send email to: admin@tutor-homework.com.

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