

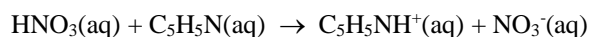
WORKSHEETS ARE DUE AT THE BEGINNING OF CLASS ON THE DATE GIVEN ON THE WORKSHEET. LATE WORKSHEETS WILL NOT BE ACCEPTED.

NOTE: EXAM 2 is **Wednesday, October 10th**. It will cover Chapter 15, and Sections 16.1, 16.3, 16.4, and 16.5 of Chapter 16. This includes the Chapter 16 ppt slides 1-31, and the Chapter 16 problems 1-10.

NAME _____ Panther ID _____

For problems involving calculations you must show your work for credit.

1) For the acid-base reaction below, identify the acid, the base, the conjugate base of the acid, and the conjugate acid of the base.



Acid _____ Conjugate base _____

Base _____ Conjugate acid _____

2) For each of the following questions circle the correct answer. There may be more than one (or no) correct answer per problem.

A strong acid

HF HNO₂ HNO₃ HClO₃

A strong soluble base

AgOH KOH Cu(OH)₂ Fe(OH)₃

3) An aqueous solution has pH = 3.91 at T = 25. °C. Find the pOH, [H₃O⁺] (concentration of hydronium ion), and [OH⁻] (concentration of hydroxide ion) for the solution.

pOH _____ [H₃O⁺] _____ [OH⁻] _____

4) Find the pH of each of the following solutions (at $T = 25. \text{ }^\circ\text{C}$):

a) A 0.0300 M aqueous solution of hydrobromic acid (HBr), a strong acid.

b) 400.0 mL of an aqueous solution containing 13.8 g of barium hydroxide ($\text{Ba}(\text{OH})_2$), MW = 171.3 g/mol), a strong soluble base.