NAME: HONORS CHEMISTRY

SECTION: pH CALCULATIONS PAIRS/CHECK/SHARE

Directions:

1. Put both names on the paper.
2. Complete the key definitions.
3. The older partner does the even problems. The younger partner does the odd problems. As you work, explain how you are doing the problem while your partner listens.
4. After each problem, discuss the answer with your partner. If both partners agree on the answer, the solver initials the answer. If an agreement can't be reached, both partners raise their hands to get the teacher's attention.
5. When all the problems have been solved, compare your answers with those of another group. If both pairs agree on the answers, circle the answer.
6. Turn in the sheet when you have finished.

Key definitions:

pH =

$[H^+][OH^-]$ = _____

pOH =

$[H^+]$ =

pH + _____ = 14

$[OH^-]$=

Note: For strong acids, the hydronium ion concentration equals the acid concentration.

Solve the following problems: Write the correct equation. Show all your work.

1. A solution of perchloric acid, a strong acid, has a hydronium ion concentration of 1.34×10^{-4}M. What is the hydroxide ion concentration?

2. Find the pOH of a 0.092M solution of hydrobromic acid, a strong acid.

3. Find the pH, pOH and the hydroxide ion concentration of a 2.75×10^{-3} M solution of nitrous acid, a weak acid with 0.72% dissociation.

4. Find the pH, pOH and $[OH^-]$ of a 2.234×10^{-6}M solution of hydrochloric acid, a strong acid.

5. A window cleaning solution is found to have a [OH-] = 0.245M. Calculate the pH, pOH and hydronium ion concentrations.

6. A 0.084M solution of acetic acid, a weak acid, is 5.1% dissociated. Calculate the hydrogen ion concentration, the hydroxide ion concentration, the pH and the pOH.

The purpose of this assignment was to:

_____

_____

Did I:	Circle the appropriate response:		
Explain how I did the problems?	Always	Sometimes	Rarely
Listen while my partner explained?	Always	Sometimes	Rarely
Give my partner positive support?	Always	Sometimes	Rarely
Stay on task during the assignment?	Always	Sometimes	Rarely
Use encouraging and polite words?	Always	Sometimes	Rarely
Record my work on the paper?	Always	Sometimes	Rarely
Demonstrate an understanding of the material?	Yes	No	

Comments: