

Homework #15
(Acids, bases and pH)
CHEM 11 (S 2016, LAC)
(Due Tuesday, June 14)

In the problems below, remember to show your work. Correct answers by themselves are not worth any points. Use the correct conversion factor approach in dealing with various units as we learned in the first weeks of this course. And don't forget to have the correct number of significant digits in your answers.

1. Since pure water has a pH of 7.00, how many hydronium ions are in one liter of such water?
2. If an aqueous solution has a concentration of 3.5×10^{-9} mol/L of hydroxyl ions, what is its concentration of hydronium ions?
3. What is the pH of an aqueous solution with 9.2×10^{-5} mol/L of H^+ ions?
4. A student measures the pH of a given aqueous solution as 4.22 and then calculates the $[OH^-]$ value as 6.03×10^{-4} M. Did she do her calculation correctly?