**Name: Period: Seat#:**

**Worksheet #9**

**Directions:** Show all work. Box your final answer. \*NOTE\* The ones in the form of X(OH)2 seem to be the most common on the AP test. You need to be able to solve for a variety of types to be safe, but the X(OH)2 seems to come up in a lot of years.

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| 1. Calculate the pH of a saturated solution of AgOH, Ksp = 2.0 x 10-8 *10.15* |
| 1. Calculate the pH of a saturated solution of Cu(OH)2, Ksp = 1.6 x 10-19 *7.835* |
| 1. Calculate the pH of a saturated solution of Mg(OH)2, Ksp = 5.61 x 10-12 *10.350* |
| 1. Calculate the pH of a saturated solution of Ba(OH)2, Ksp = 5.0 x 10-3. *13.33* |
| 1. Calculate the pH of a saturated solution of Ca(OH)2, Ksp = 7.9 x 10-6  *12.4* |
| 1. Calculate the pH of a saturated solution of Mn(OH)2, Ksp = 4.6 x 10-14 *9.65* |
| 1. Calculate the pH of a saturated solution of Ni(OH)2, Ksp = 2.8 x 10-16 *8.92* |
| 1. A saturated solution of Mg(OH)2 is prepared. The pH of the solution is 10.17. What is the Kspfor this compound? *Ksp = 1.62 x 10-12* |
| 1. What is the minimum pH at which Cr(OH)3 will precipitate? Ksp of Cr(OH)3 is 6.70 x 10-31  *6.576* |
| 1. What is the minimum pH at which Cr(OH)3 will precipitate if the solution has [Cr3+] = 0.0670 M?   Ksp of Cr(OH)3 is 6.70 x 10-31  *4.333* |
| 1. At what pH will Al(OH)3(s) begin to precipitate from 0.10 M AlCl3? The Ksp of Al(OH)3 is 1.90 x 10-33  *3.426* |