

CHAPTER 6	Calculating Concentration from pH and pOH	BLM 6.3.12
ASSESSMENT		

- What is the concentration of hydronium ions in the following solutions given their pH values?
 - $\text{pH} = 2.34$
 - $\text{pH} = 15.6$
 - $\text{pH} = 4.4$
 - $\text{pH} = 1.892$
 - $\text{pH} = 5.63$
- What is the concentration of hydroxide ions in the following solutions given the following information?
 - $\text{pOH} = 1.45$
 - $\text{pOH} = 10.672$
 - $\text{pOH} = 7.3$
 - $\text{pH} = 2.982$
 - $\text{pH} = 4.932$
 - $\text{pH} = 10.2$
- What is the concentration of hydrochloric acid, $\text{HCl}(\text{aq})$, that gives a solution with a pH of 3.69?
- What is the concentration of lithium hydroxide, $\text{LiOH}(\text{aq})$, that gives a solution with a pOH of 4.674?

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5. What is the concentration of sodium hydroxide, NaOH(aq) , that gives a solution with a pH of 10.32?

6. What is the concentration of barium hydroxide, $\text{Ba(OH)}_2\text{(aq)}$, that gives a solution with a pH of 11.836?

7. Is it possible to make an aqueous solution with strontium hydroxide, $\text{Sr(OH)}_2\text{(aq)}$, that gives a pOH of 10.54? If so calculate it. If not, explain why not.

8. What mass of hydrogen chloride gas, HCl(g) , needs to be dissolved in 2.00 L of water to create a solution with a pH of 3.298?

9. What mass of rubidium hydroxide, RbOH(s) , needs to be dissolved in 1.50 L of water to create a solution with a pH of 9.35?

10. What mass of strontium hydroxide, $\text{Sr(OH)}_2\text{(s)}$, needs to be dissolved in 3.0 L of water to create a solution with a pH of 8.34?