

CHAPTER 6	<h1>Calculating pOH and Changing from pH to pOH</h1>	BLM 6.3.10
ASSESSMENT		

1. What is the pOH of the following solutions given their hydroxide ion concentrations?

(a) $[\text{OH}^-(\text{aq})] = 4.67 \times 10^{-3} \text{ mol/L}$

(b) $[\text{OH}^-(\text{aq})] = 5.84 \times 10^{-8} \text{ mol/L}$

(c) $[\text{OH}^-(\text{aq})] = 1.478 \times 10^{-14} \text{ mol/L}$

(d) $[\text{OH}^-(\text{aq})] = 3.4 \times 10^{-2} \text{ mol/L}$

2. Which of the above solutions are considered acidic?

3. If given the pH of the following solution, give the pOH, or vice versa:

(a) $\text{pH} = 12.3$

(b) $\text{pOH} = 5.5$

(c) $\text{pOH} = 2.95$

(d) $\text{pH} = 6.629$

(e) $\text{pOH} = 1.1$

4. Fill in the following chart:

$[\text{OH}^-(\text{aq})] \text{ mol/L}$	pOH	pH
1.28		
5.35×10^{-3}		
8.459×10^{-5}		
9.6×10^{-8}		
1.934×10^{-15}		

5. Compare and contrast what happens to pH as acidity increases to what happens to pOH.

CHAPTER 6	Calculating pOH and changing from pH to pOH (continued)	BLM 6.3.10
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6. What is the pOH of a 3.2 mol/L solution of lithium hydroxide, LiOH(aq)?
7. What is the pOH of a 5.467 mol/L solution of strontium hydroxide, Sr(OH)₂(aq)?
8. What is the pH of a 3.45 mol/L solution of sodium hydroxide, NaOH(aq)?
9. What is the pOH of a solution made by dissolving 4.95 g of potassium hydroxide, KOH(aq), in 4.50 L of water?