

## pH practice

- 1) What is the pH and pOH of a  $1.2 \times 10^{-3}$  HBr solution?
- 2) What is the pH and pOH of a  $2.34 \times 10^{-5}$  NaOH solution?
- 3) What is the pH and pOH of a solution made by adding water to 15 grams of hydroiodic acid until the volume of the solution is 2500 mL?
- 4) What is the pH and pOH of a solution that was made by adding 400 mL of water to 350 mL of  $5.0 \times 10^{-3}$  M NaOH solution?
- 5) What is the pH and pOH of a solution with a volume of 5.4 L that contains 15 grams of hydrochloric acid and 25 grams of nitric acid?
- 6) A swimming pool has a volume of one million liters. How many grams of HCl would need to be added to that swimming pool to bring the pH down from 7 to 4? (Assume the volume of the HCl is negligible)

## pH practice - Answers

- 1) What is the pH and pOH of a  $1.2 \times 10^{-3}$  HBr solution?  
**pH: 2.9      pOH: 11.1**
- 2) What is the pH and pOH of a  $2.34 \times 10^{-5}$  NaOH solution?  
**pOH: 4.6      pH: 9.4**
- 3) What is the pH and pOH of a solution made by adding water to 15 grams of hydroiodic acid until the volume of the solution is 2500 mL?  
**pH: 1.6      pOH: 12.4**
- 4) What is the pH and pOH of a solution that was made by adding 400 mL of water to 350 mL of  $5.0 \times 10^{-3}$  M NaOH solution?  
**pOH: 2.7      pH: 11.3**
- 5) What is the pH and pOH of a solution with a volume of 5.4 L that contains 15 grams of hydrochloric acid and 25 grams of nitric acid?  
**pH: 0.82      pOH: 13.18**
- 6) A swimming pool has a volume of one million liters. How many grams of HCl would need to be added to that swimming pool to bring the pH down from 7 to 4? (Assume the volume of the HCl is negligible)  
**3545 grams (100. moles)**