| CHAPTER 6 | | BLM 6.3.8 |
| ASSESSMENT | **Calculating pH After Dilution** | |

1. A 35.0 mL volume of a 0.489 mol/L solution of hydrochloric acid is diluted to a volume of 300 mL.

    (a) What is the pH of the concentrated solution?

    (b) What is the concentration of the diluted solution?

    (c) What is the pH of the diluted solution?

    (d) Compare your answers to **(a)** and **(c)**. Considering the acid solution has been diluted, do your answers make sense?

2. A 20 mL volume of a 3.52×10^{-3} mol/L solution of nitric acid is diluted to a volume of 25 L. What is the pH of the diluted solution?

3. A concentrated solution is made by dissolving 3.5 g of hydrobromic acid in 20.0L of water. A 50.0 mL volume of the concentrated solution is then used to make 100 L of a new solution. What is the pH of the new solution?

4. Why might the dilute solution in Question 3 be made using a dilution as described instead of just dissolving a solid into the full 100 L?