

Name: _____

Blk: _____ Date: _____

Chemistry 11
DILUTIONS

THE DILUTION EQUATION:

Mixing a SOLUTION with water:

Example 1. What is the resulting [NaCl] when 200.0 mL of 0.500 M NaCl is added to 300.0 mL of water?

Mixing different concentrations of the SAME substance:

Example 2. What is the resulting [NaCl], when 300.0 mL of 0.250 M NaCl is added to 500.0 mL of 0.100 M NaCl?

Making a dilute solution from a concentrated one:

Example 3. What volume of 6.00 M HCl is used to make 2.00 L of 0.125 M HCl?

Determining the concentration of the initial solution:

Example 4. A student mixes 100.0 mL of water with 25.0 mL of a Sodium chloride solution that has an unknown concentration. The student determines the molarity of the diluted Sodium chloride solution to be 0.0876 M, what is the molarity of the original Sodium chloride solution?