

General Chemistry
Mr. MacGillivray
Worksheet: Dilution Calculations

1. What is the formula for computing dilutions?
2. What does the term “concentrated” mean? What word has the opposite meaning of the term “concentrated”?
3. What is the molarity of the solution that results from diluting 20.0 ml of a 4.00M solution to a new volume of 68.3 ml?
4. What is the molarity of the solution that results from diluting 30.0 ml of a 9.02M solution to a new volume of 45.0 ml?
5. A student needs to prepare 50.0 mL of a 0.250 M solution of HCl (aq). The only solution available, however, is a 3.00 M stock solution of HCl (aq). How will the student prepare the needed solution?
6. A student needs to prepare 25.0 mL of a 0.600 M solution of NaOH (aq). The only solution available, however, is a 10.00 M stock solution of NaOH (aq). How will the student prepare the needed solution?
7. An aqueous solution of NaCl has a concentration of 0.500 M. If 35.0 mL of this solution is allowed to evaporate to a volume of 20.0 ml,
 - a. Is the solution more concentrated or more dilute afterwards?
 - b. What is the new concentration of the solution?