

Name:

Date:

Molarity: a \_\_\_\_\_ description of solution concentration

Molarity Abbreviated: \_\_\_\_\_

Molarity =

**Show all work and circle your final answer.**

1. To make a 4.00 M solution, how many moles of solute will be needed if 12.0 liters of solution are required?
  
  
  
  
  
  
  
  
  
  
2. How many moles of sucrose are dissolved in 250 mL of solution if the solution concentration is 0.150 M?
  
  
  
  
  
  
  
  
  
  
3. What is the molarity of a solution of  $\text{HNO}_3$  that contains 12.6 grams  $\text{HNO}_3$  in 1.0 L of solution?
  
  
  
  
  
  
  
  
  
  
4. How many grams of potassium nitrate are required to prepare 0.250 L of a 0.700 M solution?

questions continued on next page

Unit 7C Molarity Practice Problems 1

**Show all work and circle your final answer.**

5. 125 cm<sup>3</sup> of solution contains 3.5 moles of solute. What is the molarity of the solution?
6. Which solution is more concentrated? Solution "A" contains 50.0 g of CaCO<sub>3</sub> in 500.0 mL of solution. Solution "B" contains 6.0 moles of H<sub>2</sub>SO<sub>4</sub> in 4.0 L of solution. **SHOW WORK!**
7. How many liters of solution can be produced from 2.5 moles of solute if a 2.0 M solution is needed?
8. What would be the concentration of a solution formed when 1.00 g of NaCl are dissolved in water to make 100.0 mL of solution?