

Molarity:

- a _____ description of solution concentration.
- Abbreviated _____

Molarity = _____

Problems: 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 HNO_3 that contains 12.6 grams 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?

5. 125 cm^3 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_3 in 500.0 mL of solution. Solution "B" contains 6.0 moles of H_2SO_4 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?