

Directions: Complete the table. SHOW ALL WORK ... SHOW ALL WORK ... SHOW ALL WORK ... SHOW ALL WORK!!!

Name	Calcium iodide <i>Sample</i>	Sodium chloride	Potassium carbonate	Aluminum hydroxide	Glucose	Sulfuric acid
Formula	CaI ₂					
Electrolyte or Non-electr.	Electrolyte					
Ions in Solution	Ca ⁺² , 2 I ⁻¹ (cation), (anion)					
Mass of Solute	10.0 g	5.85 g				25.0 g
Moles of Solute	10.0 g x (1 mole / 293 g) = 0.034 mole		0.25 mole		0.30 mole	
Volume of Solution	750.0 mL	100.0 mL		1200.0 mL		500.0 mL
Molarity of Solution	0.034 moles / .750 L = 0.045 <u>M</u>		0.50 <u>M</u>	0.75 <u>M</u>	1.5 <u>M</u>	
Molarity of Cation	1 x .045 <u>M</u> = 0.045 <u>M</u>					
Molarity of Anion	2 x .045 <u>M</u> = 0.090 <u>M</u>					

- **SHADED BOXES:** You must use the Molarity Formula ($M = \text{moles} / V_{(L)}$) to solve for each.
- Follow the example in the first column to complete the rest of the table above.

Molarity Word Problem:

What volume of glucose solution above would you need to use in order to prepare 500 mL of 0.55 M solution? *SHOW WORK!*