

CHEMISTRY

A. Calculate the molarity of the following solutions:

_____ 1. 48 g LiOH dissolved in 1.0 L of solution.

_____ 2. 180 g MgSO₄ dissolved in 1.5 L of solution.

_____ 3. 400.5 g AlCl₃ dissolved in 750 mL of solution.

_____ 4. 490 g H₂SO₄ dissolved in 1500 mL of solution.

_____ 5. 140 g KOH dissolved in 2.5 L of solution

_____ 6. 132 g (NH₄)₂SO₄ dissolved in 250 mL of solution.

_____ 7. 94.5 g Zn(NO₃)₂ dissolved in 1.0 L of solution.

_____ 8. 2.0 g NaOH dissolved in 500 mL of solution.

_____ 9. 24.0 g HC₂H₃O₂ dissolved in 2.0 L of solution.

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_____ 10. 6.5 g KCN dissolved in 300 mL of solution.

B. Determine the number of moles of solute present in:

_____ 11. 500 mL of a 1.5 M solution

_____ 12. 2.5 L of a .5 M solution

_____ 13. 15.0 cm³ of a 5 M solution.

_____ 14. 50.0 mL of a .750 M solution.

_____ 15. 1.25 dm³ of a 1.0 M solution.

C. Calculate the number of grams necessary to prepare the following solutions:

_____ 16. 1 L of 2.0 M NaOH

_____ 17. 500 mL of 0.25 M KOH

_____ 18. 250 cm³ of 0.5 M H₂SO₄

_____ 19. 5.0 L of 1.0 M hydrochloric acid

_____ 20. 1.5 L of 0.1 M nitric acid.