

1. How many grams of KNO_3 are needed to prepare 500.5 mL of a 0.152 M solution?

7.77 g KNO_3

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2. How many milliliters of a 1.25 M $\text{Mg}(\text{OH})_2$ contains 5.15 g of $\text{Mg}(\text{OH})_2$?

70.6 mL

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3. What is the molarity of a solution prepared by dissolving 15.6 g of Na_2SO_4 in 250.0 mL of solution?

0.439 M

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4. How many grams of $\text{C}_6\text{H}_{12}\text{O}_6$ are needed to make 1.5 L of a 0.275 M solution?

74.3 g $\text{C}_6\text{H}_{12}\text{O}_6$

5. What volume of a 12.0 M HCl solution is needed to prepare 1.25 L of a 2.50 M HCl solution?

0.260 L

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6. 52.1 mL of a NaOH solution of unknown concentration was used to prepare 500.0 mL of a 2.85 M NaOH solution. What was the unknown concentration?

27.4 M

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7. How much of a 5.0 M sucrose solution should be used to make 85.0 mL of a 0.040 M solution?

0.680 mL

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8. A 2.5 L sample of a 5.8 M KCl solution is diluted to 55.0 L. What is the molarity of the diluted solution?

0.264 M