

Molarity Calculations

Calculate the molarities of the following solutions:

- 1) 2.3 moles of sodium chloride in 0.45 liters of solution.

- 2) 1.2 moles of calcium carbonate in 1.22 liters of solution.

- 3) 0.090 moles of sodium sulfate in 12 mL of solution.

- 4) 0.750 moles of lithium fluoride in 65.0 mL of solution.

- 5) 0.80 moles of magnesium acetate in 5.0 liters of solution.

- 6) 120.0 grams of calcium nitrite in 240.0 mL of solution.

- 7) 98 grams of sodium hydroxide in 2.2 liters of solution.

- 8) 1.20 grams of hydrochloric acid in 25.0 mL of solution.

- 9) 45 grams of ammonium chloride in 0.75 L of solution.

Explain how you would make the following solutions. You should state how many grams of the substance you need to make the solution, not how many moles.

10) 2 L of 6 M HCl

11) 1.5 L of 2 M NaOH

12) 0.75 L of 0.25 M Na₂SO₄

13) 45 mL of 0.12 M sodium carbonate

14) 250 mL of 0.75 M lithium nitrite

15) 56 mL of 1.1 M iron (II) phosphate

16) 6.7 L of 4.5 M ammonium nitrate

17) 4.5 mL of 0.05 M magnesium sulfate

18) 90 mL of 1.2 M BF₃