

Honors Chemistry: Solutions 3 Problem Set- Molarity

- Calculate the molarity, M, of the following three solutions:
 - 3.0 moles of sodium chloride are dissolved in 1 liter of solution.
 - 0.5 moles of magnesium fluoride are dissolved in 2 liters of solution.
 - 3 moles of sodium hydroxide are dissolved in 0.25 liters of solution.
- How many liters of a 4.0 M calcium chloride solution would contain 2 moles of calcium chloride?
- How many liters of a 0.5 M calcium chloride solution would contain 3.5 moles of calcium chloride?
- How many liters of a 2.5 M calcium chloride solution would contain 1.0 mole of calcium chloride?
- How many moles of potassium chloride are there in 2 liters of a 3.0 M solution?
- What is the molarity, M, of a solution in which 116 grams of potassium fluoride are dissolved in 2 liters of solution?
- How many grams of potassium fluoride are in 2 liters of a 3.0 M solution of potassium fluoride?
- How many grams of ammonia are dissolved in 85 mL of a 0.75 M solution?

9. The tanks in our classroom contain 34 grams of sodium chloride per liter. What is the molarity of the saltwater?

10. What is the molarity of 245.0 g of H_2SO_4 dissolved in 1.000 L of solution?

11. What is the molarity of 5.30 g of sodium carbonate dissolved in 400.0 mL solution?

12. How many moles of sodium phosphide are contained in 100.0 mL of a 0.200 M solution?

13. What weight (in grams) of sodium phosphide would be contained in problem #12?

14. What volume (in mL) of 18.0 M sulfuric acid is needed to contain 2.45 g H_2SO_4 ?