

1. Calculate the molarity of 500.0 ml of solution containing 49 grams of naphthalene, $C_{10}H_8$, dissolved in benzene, C_6H_6 .
2. How many grams of sodium hydroxide, NaOH, are needed to prepare 1.00 liter of a 2.5 M solution?
3. Determine the molarity of a solution containing 16 grams of ammonium nitrate, NH_4NO_3 , in 0.500 L of solution?
4. In what volume of solution must 7.6 grams of zinc chloride, $ZnCl_2$, be dissolved to prepare a 0.100 M solution?

5. Calculate how many grams of sodium nitrate, NaNO_3 , must be dissolved in water to produce 250.0 ml of a 1.6 molar solution.

6. If you dilute 175 ml of a 1.6 M solution of LiCl to 1.0 L, determine the new concentration of the solution

7. 1.00 L of a solution is prepared by dissolving 125.6 g NaF in it. If I took 185 ml of that solution and diluted it to 500 ml, determine the molarity of the resulting solution.

8. A 23% solution, by mass, of acetic acid has a density of 1.03 g/cm^3 . Determine its molarity.