

Molarity Worksheet

Find the molarity of the following solutions: (1-5)

- 0.5 moles of sodium chloride is dissolved to make 0.05 liters of solution.
- 0.5 grams of sodium chloride is dissolved to make 0.05 liters of solution.
- 0.5 grams of sodium chloride is dissolved to make 0.05 mL of solution.
- 734 grams of lithium sulfate are dissolved to make 2500 mL of solution.
- 6.7×10^{-2} grams of $\text{Pb}(\text{C}_2\text{H}_3\text{O}_2)_4$ are dissolved to make 3.5 mL of solution.

- Consider two solutions: In the first solution, 1.0 moles of sodium chloride is dissolved to make 1.0 liters of solution. In the second one, 1.0 moles of sodium chloride is added to 1.0 liters of water. Is the molarity of each solution the same? Explain your answer.
- How many grams of beryllium chloride are needed to make 125 mL of a 0.050 M solution?
- The density of ethanol is 0.789 g/mL. How many grams of ethanol should be mixed with 225 mL of water to make a 4.5% (v/v) mixture?
- Explain how to make at least one liter of a 1.25 M ammonium hydroxide solution.
- What is the molarity of a solution in which 0.45 grams of sodium nitrate are dissolved in 265 mL of solution?
- What will the volume of a 0.50 M solution be if it contains 25 grams of calcium hydroxide?
- How many grams of ammonia are present in 5.0 L of a 0.050 M solution?
- If you add 25 mL of water to 125 mL of a 0.15 M NaOH solution, what will the molarity of the diluted solution be?
- If you add water to 100 mL of a 0.15 M NaOH solution until the final volume is 150 mL, what will the molarity of the diluted solution be?
- How much 0.05 M HCl solution can be made by diluting 250 mL of 10 M HCl?
- You have 345 mL of a 1.5 M NaCl solution. If you boil the water until the volume of the solution is 250 mL, what will the molarity of the solution be?
- How much water would you need to add to 500 mL of a 2.4 M KCl solution to make a 1.0 M solution?