

Name _____

Molarity Calculations

Calculate the molarities of the following solutions:

- 1) 2.3 moles of sodium chloride in 0.45 liters of water.
- 2) 1.2 moles of calcium carbonate in 1.22 liters of water.
- 3) 0.09 moles of sodium sulfate in 12 mL of water.
- 4) 0.75 moles of lithium fluoride in 65 mL of water.
- 5) 98 grams of sodium hydroxide in 2.2 liters of water.

Dilutions

1. If I wanted to make 350mL of a .5M solution of Hydrochloric Acid (HCl), and I had a bottle of 13M HCl. How much HCl would I need to add? How much H₂O would I need to add?
2. If I have 340mL of a .5M NaBr solution, what will the concentration be if I add 560mL more water to it? (Hint: final volume will be 900mL)
3. If I leave 750 mL of .5M sodium chloride solution uncovered on a windowsill and 150mL of the solvent evaporates what will the new concentration of the sodium chloride solution be?

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Answers

Molarity Calculations

1. 5.1M
2. 1M
3. 7.5M
4. 11.5M
5. Sodium Hydroxide = NaOH
1.1M

Dilutions

1. 13.5 mL HCl, and 336.5 mL H₂O
2. .18M
3. .625M