

## Molarity

How do we measure amounts in solutions?

What is molarity?

What forms can the equation take?

What about making solutions from solutions?

Now to some math problems

1. What is the molarity of 2.500 moles of KCl in 1.250 liters of water?
2. Assume 6.73 g of  $\text{Na}_2\text{CO}_3$  is dissolved in enough water to make 25.00 mL. What is the concentration?
3. What volume of 0.123M NaOH contains 0.025 moles of NaOH?

4. If I have 2.75 L of 0.500 M  $\text{NaHCO}_3$ , how many moles do I have? How many grams?

5. How many grams of KOH are needed to make 127.3 mL of 0.567 M solution?

6. Hydrochloric acid comes as a concentrate. It is 12.1 Molar. How many mL of concentrate are required to make 1.000 L of 1.000M?

7. If 25.00 mL of concentrated (12.1M) HCl are diluted to 2.50 L what is the new concentration?

8. Sulfuric acid comes as 18.1 M concentrate. How many mL's of it do I need to prepare 10.00 L of 1.500 molar.

9. 25.00 mL of concentrated HCl are diluted to 1.000 L. 100.0 mL of this solution is then diluted to 500.0 mL. What is the final concentration?

10. I have a solution that is 5.55 M has a volume of 2500.0 mL. How many millimoles does it contain?