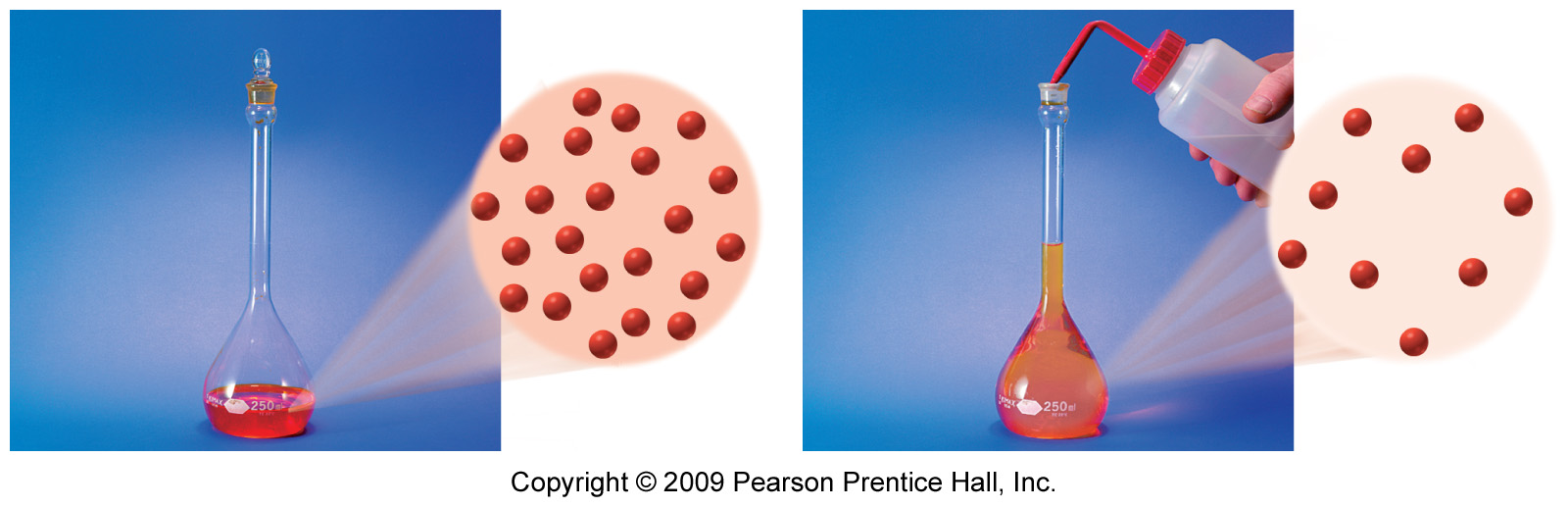
|  |  |
| --- | --- |
| **Dilutions**  **The Mole** | Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**In a dilution**:

* water is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* volume \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* concentration \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

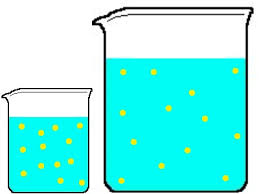


In the initial and diluted solution:

1. the moles of solute are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. the concentrations and volumes are related by the following equation:

*M*1*V*1 = *M*2*V*2

***initial diluted***



What volume of a 2.00 M HCl solution can be prepared by diluting 25.0 mL of 14.0 M (m/v) HCl solution?

**Prepare a table**:

Solve dilution equation for unknown and enter values:

What is the molarity of a solution prepared by diluting 10.0 mL of 9.00M NaOH to 60.0 mL?

What is the final volume (mL) of 15.0 mL of a 1.80 M KOH diluted to give a 0.300 M solution?