



Conversions – Percentage Strength

Chapter 6 Worksheet D

You'll need to memorize the following equation:

$$\frac{\text{solute}}{\text{solvent}} = \frac{\%}{100}$$

The solution can be defined three ways:

$$\frac{\text{g}}{\text{mL}} \quad \frac{\text{g}}{\text{g}} \quad \frac{\text{mL}}{\text{mL}}$$

- 1) How many mL of solvent is required to make a 10% soln. from 20 g of solute?
 - a. 20 mL
 - b. 50 mL
 - c. 100 mL
 - d. 200 mL
- 2) How many mL of solvent is required to make a 20% soln. from 10 g of solute?
 - a. 30 mL
 - b. 50 mL
 - c. 70 mL
 - d. 90 mL
- 3) How many mL of solvent is required to make a 5% soln. from 1 g of solute?
 - a. 20 mL
 - b. 50 mL
 - c. 100 mL
 - d. 200 mL
- 4) How many g of solute are there in 2.5 L of a 25% solution?
 - a. 500 g
 - b. 525 g
 - c. 600 g
 - d. 625 g
- 5) How many g of solute are there in 125 mL of a 5% solution?
 - a. 5 g
 - b. 5.25 g
 - c. 6 g
 - d. 6.25 g
- 6) How many milligrams of NaCl could be extracted from a 5 mL solution of 0.225% NaCl?
 - a. 0.01125 mg
 - b. 8.25 mg
 - c. 11.25 mg
 - d. 825 mg
- 7) How many grams of NaCl are in 300 mL of 0.45% NaCl?
 - a. 1,350 g
 - b. 135 g
 - c. 13.5 g
 - d. 1.35 g
- 8) What percentage strength solution would result from combining 7.5 g KCl with 250 mL of D5W?
 - a. 5%
 - b. 3%
 - c. 1%
 - d. 0.5%
- 9) What percentage strength solution would result from combining 10 g Dextrose with 500 mL of Water?
 - a. 50%
 - b. 30%
 - c. 10%
 - d. 2%