Concentration Calculations Worksheet #1

% Composition by Mass	% Composition by Volume
Molarity	**Parts per Million**
Grams per Liter	**$M_1V_1 = M_2V_2$**

You have 15 grams of CaCl2 dissolved into a total of 250 mL of water. (Use to answer #1-4)

1) What is the percent by mass of $CaCl_2$?

2) What is the concentration of $CaCl_2$ in the solution in g/L?

3) What is the concentration of $CaCl_2$ in the solution expressed in Molarity?

4) What is the concentration of $CaCl_2$ in the solution expressed as parts per million (ppm)?

Water has a density of 1 g/mL. Fruit juice concentrate has a mass of 500 g/ 100 mL. Pretend you're making a fruit juice from concentrate and you add 100 mL of concentrate to 2 L of water.

5) What is the percent by volume of the concentrate in the final solution?

6) What is the percent by mass of the *water* in the final solution?