

Solution Chemistry II Worksheet✓ **Ions in Solutions****Name:****Date:****Block:**

- Write the balanced ionization equation for the following solutes in water:
 - CaCO_3
 - Cesium phosphate
- Calculate the number of moles of aqueous ions in the following solutions. Assume that each dissolved substance complete dissociates.
 - 0.60 L of 0.20 M K_2SO_4
 - 75.0 mL of 0.150 M MnCl_2
- What is the concentration of SO_4^{2-} present in 0.135 M $\text{Al}_2(\text{SO}_4)_3$?
- What is the $[\text{Cl}^-]$ formed when 10.0 g of $\text{BaCl}_{2(s)}$ is dissolved and diluted to 0.600 L?
- When 350.0 mL of 0.250 M MgCl_2 is boiled down to a final volume of 275.0 mL, what is the $[\text{Cl}^-]$ in the resulting solution?

6. A solution is made by mixing 100.0 mL of 0.200 M MgSO_4 and 150.0 mL of 0.400 M Na_2SO_4 . What is the concentration of each ionic species in the final solution?
7. A chemistry student dissolves 3.25 g of K_2CrO_4 and 1.75 g of $\text{K}_2\text{Cr}_2\text{O}_7$ in water and dilutes the mixture to a total volume of 100.0 mL. What is the concentration of all the ions in the solution?
8. What is the concentration of all ions in a solution given that 15.0 mL of 0.325 M Na_3PO_4 was mixed with 35.0 mL of 0.225 M K_2SO_4 ?