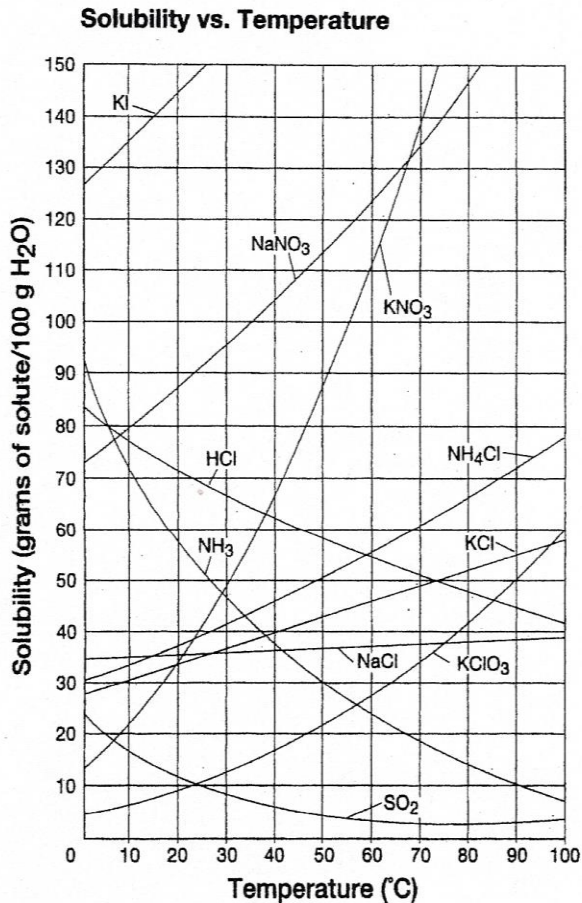


# EXTRA PRACTICE: Interpreting Solubility Curves Practice #3

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Block: \_\_\_\_\_

## Solubility Curves



- Most substances on this graph show an increase in solubility with an increase in temperature. What are the exceptions? \_\_\_\_\_
- Each curve shows how solubility for that substance changes as \_\_\_\_\_ changes. Solubilities of substances whose curves show greater slopes are \_\_\_\_\_ (more/less) affected by temperature changes than those that have more gradual slopes.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Using Solubility Curves

Block: \_\_\_\_\_

- If 50g of water saturated with potassium chlorate at 23°C is slowly evaporated to dryness, how many grams of the dry salt will be recovered? \_\_\_\_\_
- What is the smallest mass of water required to dissolve completely 23g of ammonium chloride at 40°C? \_\_\_\_\_
- A saturated solution of sodium nitrate in 100g water at 40°C is heated to 50°C. What is the rate of increase in solubility in grams per degree? \_\_\_\_\_
- Which salt has solubility values that are least affected by changes in temperature? \_\_\_\_\_
- If 30g of potassium chloride is dissolved in 100g water at 45°C, how many additional grams of KCl would be needed to make the solution saturated at 80°C? \_\_\_\_\_
- At what temperature do potassium chlorate and potassium chloride have the same solubility in water? \_\_\_\_\_
- At 50°C, 100g water is saturated with sulfur dioxide. How many grams of sulfur dioxide must be added to saturate the solution at 0°C? \_\_\_\_\_
- At 50°C, 100g water is saturated with potassium nitrate. How many grams of potassium nitrate will precipitate when the solution is cooled to 40°C? \_\_\_\_\_
- How many grams of sodium chloride are required to saturate 500g water at 100°C? \_\_\_\_\_
- Which compound is least soluble in water at 12°C? \_\_\_\_\_
- At 80°C, 100g water is saturated with potassium chloride. How many grams of KCl will precipitate when the solution is cooled to 45°C? \_\_\_\_\_
- A saturated solution of a compound contains 130g of solute in 100g water. What is the compound? \_\_\_\_\_
- How many grams of sodium nitrate are required to saturate 200g water at 10°C? \_\_\_\_\_
- Which saturated solution of a chloride has the greatest percentage by mass of solute at 60°C? \_\_\_\_\_
- An aqueous solution of potassium nitrate at 50°C is 60 percent by mass KNO<sub>3</sub>. Is this solution unsaturated, saturated, or supersaturated? \_\_\_\_\_

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