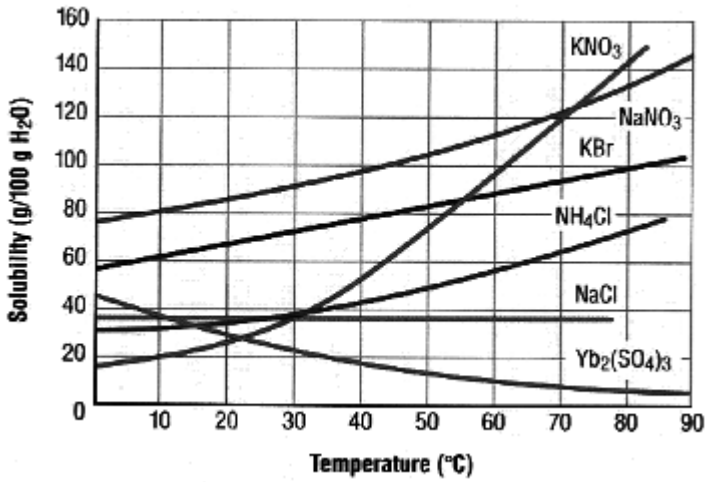
Name _____ Class _____ Date _____

Reading Solubility Curves



Solubility is the measure of the mass of solute that can be dissolved in 100. g solvent (usually water) at a given temperature. The graph at left shows the solubility of several compounds. Use this graph to answer the questions below.

1. How many grams of potassium bromide can be dissolved in 100. g of 40°C water? _____

2. What mass potassium nitrate can be dissolved in **200**. g of 30°C water? _____

3. Which compound's solubility seems to be least affected by temperature? _____

4. A solution contains 20. g $Yb_2(SO_4)_3$ in 100. g of 35°C water. Is this solution unsaturated, saturated or supersaturated? Justify your answer.

   _____

   _____

5. A solution contains 20. g NaCl in 100. g water at 40°C. How much more NaCl could be added?

   _____

6. At what temperature are the solubilities of potassium bromide and potassium nitrate equal? _____

7. In general, as the temperature of the solvent increases, the mass of a solid solute in will increase. Which of the compounds in the graph is an exception to that general rule? _____

8. How does the solubility graph of gases dissolved in water compare to the curves in this graph?

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9. A solution of potassium nitrate contains 130. g in 100. g of 70°C water. Is this solution unsaturated, saturated, or supersaturated? How must it have been prepared?

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