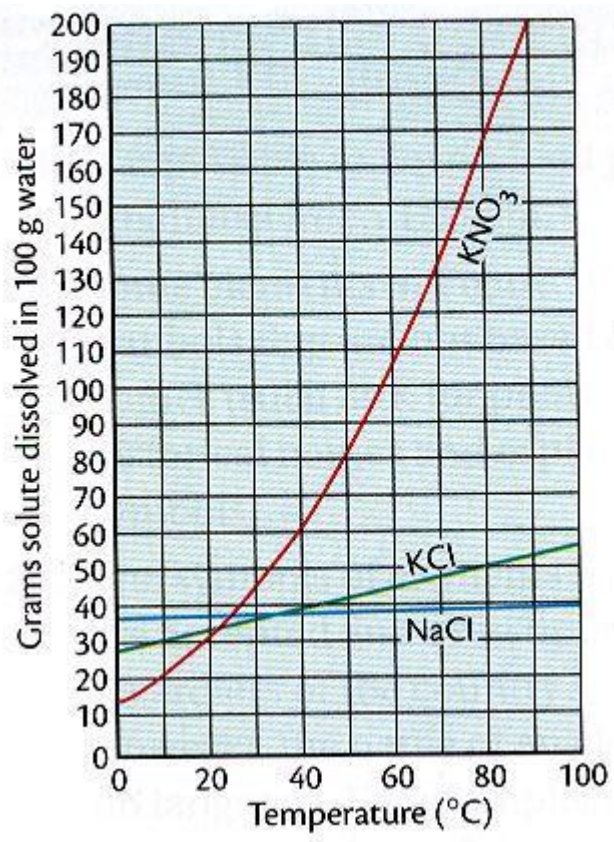
Solubility Curves

Name_____



1) At what temperature will the solubility of potassium nitrate be 25 g per 100 g water?

2) How much potassium nitrate will dissolve in 100 g water at 40°C?

3) What mass (in grams) of potassium nitrate (KNO_3) will dissolve in 100 g water at 60 °C?

4) What mass (in grams) of potassium chloride (KCl) will dissolve in 100 g water at 60 °C?

5) You dissolve 25 g potassium nitrate in 100 g water at 30 °C, producing an unsaturated solution. How much more potassium nitrate (in grams) must be added to form a saturated solution at 30 °C?

6) What is the minimum mass (in grams) of 30 °C water needed to dissolve 25 g potassium nitrate?

7) You place 50 g NaCl in 100 g water at 30 °C.
a) Classify the solution as unsaturated or saturated.

b) Of the 50 g NaCl, about what mass will dissolve?

c) Describe what you would see in the beaker.

8) At 80 °C, more KCl can dissolve in 100 g of water than at 10 °C. How many more grams of KCl can dissolve in the warmer water than the colder water?