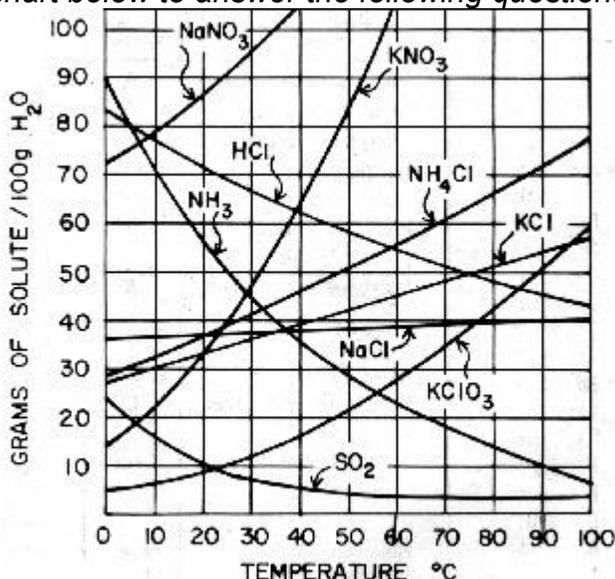


# Solubility Curve Worksheet

Use the solubility chart below to answer the following questions:

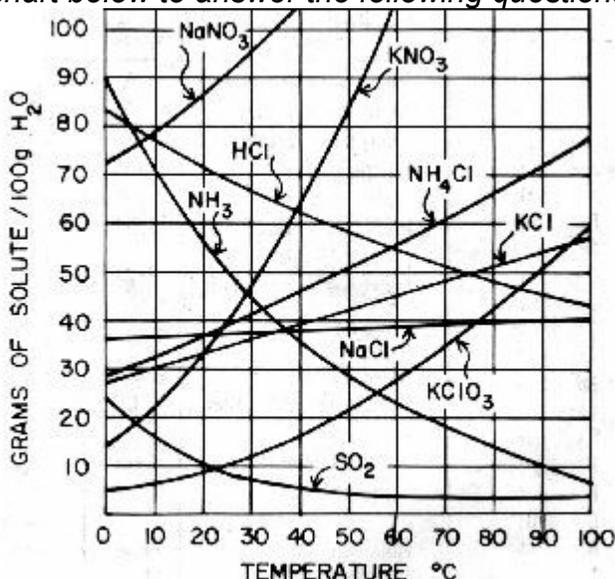


Graph from U. Va Department of Physics.

- 1) What is the solubility of potassium nitrate at 30<sup>0</sup> C? \_\_\_\_\_
- 2) How many grams of ammonia can I dissolve in 200 grams of water at a temperature of 45<sup>0</sup> C?  
\_\_\_\_\_
- 3) At what temperature is the solubility of sodium chloride the same as the solubility of potassium chloride?  
\_\_\_\_\_
- 4) How many grams of ammonium chloride would I need to make 300 grams of a saturated solution at 70<sup>0</sup> C?  
\_\_\_\_\_
- 5) What do all of the compounds that decreased in solubility over the temperature range in the graph have in common?  
\_\_\_\_\_
- 6) What compound is least soluble at 40<sup>0</sup> C?  
\_\_\_\_\_
- 7) What ionic compound is least soluble at 40<sup>0</sup> C?  
\_\_\_\_\_

## Solubility Curve Worksheet Answers

Use the solubility chart below to answer the following questions:



Graph from U. Va Department of Physics.

- 1) What is the solubility of potassium nitrate at 30<sup>o</sup> C?      **46 g / 100 g H<sub>2</sub>O**
  
- 2) How many grams of ammonia can I dissolve in 200 grams of water at a temperature of 45<sup>o</sup> C?  
**64 grams (2 x 32 grams)**
  
- 3) At what temperature is the solubility of sodium chloride the same as the solubility of potassium chloride?  
**34<sup>o</sup> C**
  
- 4) How many grams of ammonium chloride would I need to make 300 grams of a saturated solution at 70<sup>o</sup> C?  
**183 grams**
  
- 5) What do all of the compounds that decreased in solubility over the temperature range in the graph have in common?  
**They are all gases**
  
- 6) What compound is least soluble at 40<sup>o</sup> C?      **sulfur dioxide**
  
- 7) What ionic compound is least soluble at 40<sup>o</sup> C?      **KClO<sub>3</sub>**