

Solubility Curve Worksheet

- 1) Define solubility.

- 2) Look at the graph below. In general, how does temperature affect solubility?

- 3) Which compound is LEAST soluble at 10 °C? _____
- 4) How many grams of KCl can be dissolved in 100g of water at 80°C? _____
- 5) How many grams of NaCl can be dissolved in 100g of water at 90°C? _____
- 6) At 40°C, how much KNO₃ can be dissolved in 100g of water? _____
- 7) Which compound shows the least amount of change in solubility from 0°C-100°C?

- 8) At 30°C, 90g of NaNO₃ is dissolved in 100g of water. Is this solution saturated or unsaturated?

- 9) At 60°C, 72g of NH₄Cl is dissolved in 100g of water. Is this solution saturated or unsaturated?

- 10) A saturated solution of KClO₃ is formed from one hundred grams of water. If the saturated solution is cooled from 90°C to 50°C, how many grams of precipitate are formed? _____

11) A saturated solution of NH₄Cl is formed from one hundred grams of water. If the saturated solution is cooled from 80°C to 40°C, how many grams of precipitate are formed? _____

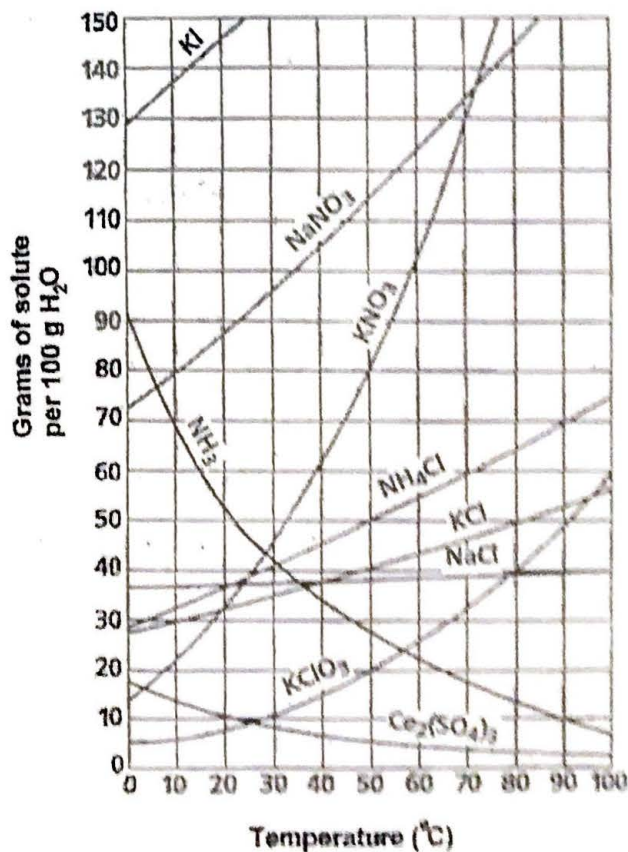
12) Which compounds show a *decrease* in solubility from 0°C-100°C?

13) Which compound is the most soluble at 10°C?

14) Which compound (besides Ce₂(SO₄)₃) is the least soluble at 50°C? _____

15) For each of the following solutions, explain how much of the solute will dissolve and how much will remain undissolved at the bottom of the test tube?
a) 120 g of KCl in 100 g of water at 80°C

b) 130 g of NaNO₃ in 100 g of water at 50°C



SOLUBILITY CURVES

Name _____

Answer the following questions based on the solubility curve below.

- Which salt is least soluble in water at 20° C? _____
- How many grams of potassium chloride can be dissolved in 200 g of water at 80° C?

- At 40° C, how much potassium nitrate can be dissolved in 300 g of water? _____
- Which salt shows the least change in solubility from 0° – 100° C?

- At 30° C, 90 g of sodium nitrate is dissolved in 100 g of water. Is this solution saturated, unsaturated or supersaturated?

- A saturated solution of potassium chlorate is formed from one hundred grams of water. If the saturated solution is cooled from 80° C to 50° C, how many grams of precipitate are formed? _____
- What compound shows a decrease in solubility from 0° to 100° C? _____
- Which salt is most soluble at 10° C? _____
- Which salt is least soluble at 50° C? _____
- Which salt is least soluble at 90° C? _____

