

Solubility Graph Worksheet

Name _____ Date _____ Period _____

Remember to refer to the solubility graph study guide for hints on using a solubility graph.

1. Why do the temperatures on the graph only go from 0°C to 100°C ?
because water freezes at 0°C and boils at 100°C so it is only a liquid from $0-100^{\circ}\text{C}$
2. Which substance is most soluble at 60°C ? potassium iodide
3. Which two substances have the same solubility at 80°C ?
sodium chloride and potassium chlorate
4. Which substance's solubility changes the most from 0°C to 100°C ? potassium nitrate
5. Which substance's solubility changes the least from 0°C to 100°C ? sodium chloride
6. What is the solubility of potassium nitrate at 90°C ? 205g / 100 mL water
7. At what temperature does potassium iodide have a solubility of $150\text{ g} / 100\text{ cm}^3$ water? 12.5°C
8. You have a solution of sodium nitrate containing 140 g at 65°C . Is the solution saturated, unsaturated, or supersaturated? Supersaturated
9. You have a solution of potassium chlorate containing 4 g at 65°C . How many additional grams of solute must be added to it, to make the solution saturated? $30 - 4 = 26\text{ g}$
10. A solution of potassium iodide at 70°C contains 200 g of dissolved solute in 100 cm^3 water. The solution is allowed to cool. At what new temperature would crystals begin to start forming?
 42.5°C