

# Solubility Worksheet

Name: \_\_\_\_\_ Per. \_\_\_\_\_

1. Name the 2 parts of a solution and define each.

a.

b.

2. Name the 3 factors that influence the rate at which a solute dissolves in a solvent and explain why each factor has an influence.

a.

b.

c.

3. \_\_\_\_\_ is the most common solvent. It is referred to as the \_\_\_\_\_ solvent.

*Refer to the solubility curve to the right to answer the following questions:*

4. At a temperature of 50°C, which **salt (ionic compound)** is the most soluble \_\_\_\_\_? Which **salt (ionic compound)** is the least soluble? \_\_\_\_\_

5. Which **salt (ionic compound)** shows the greatest rate of increase in solubility as the temperature increases? \_\_\_\_\_ Which **salt (ionic compound)** shows the least increase? \_\_\_\_\_

6. Give the approximate solubility (in g/100g of water) of the following salts at 20°C.

a. Potassium chlorate \_\_\_\_\_

b. Potassium nitrate \_\_\_\_\_

c. Sodium chloride \_\_\_\_\_

d. Sodium nitrate \_\_\_\_\_

e. Potassium chloride \_\_\_\_\_

f. Ammonium chloride \_\_\_\_\_

7. What would be the minimum temperature, in °C, for the amount of each solute listed below to dissolve in 100g of water?

a. 20g KClO<sub>3</sub> \_\_\_\_\_

b. 90g KNO<sub>3</sub> \_\_\_\_\_

c. 50g KCl \_\_\_\_\_

d. 100g NaNO<sub>3</sub> \_\_\_\_\_

e. 140g KI \_\_\_\_\_

f. 60g NH<sub>4</sub>Cl \_\_\_\_\_

