

Name : \_\_\_\_\_ Date : \_\_\_\_\_

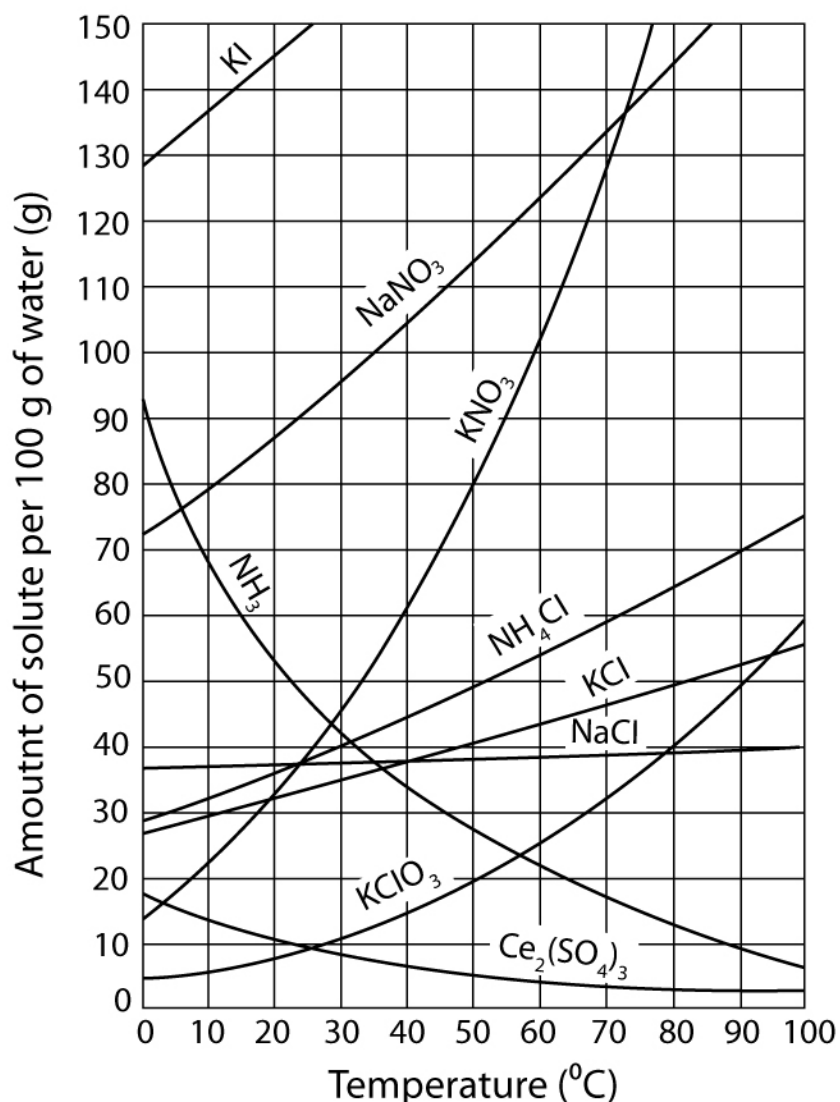
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## Solubility Practice



Look at the given solubility curve and answer the following questions.



1. What mass of solute will dissolve in 100 mL of water at the following temperatures?

a. KNO<sub>3</sub> at 70 °C \_\_\_\_\_

b. NaCl at 100 °C \_\_\_\_\_

c. NH<sub>4</sub>Cl at 90 °C \_\_\_\_\_

d. Which of the above three substances is most soluble in water at 15 °C? \_\_\_\_\_

2. Fill in the blanks.

a. On a solubility curve, the lines indicate the concentration of a \_\_\_\_\_ solution, which is the maximum amount of solute that can dissolve in the solvent at that specific temperature.

b. Values on the graph \_\_\_\_\_ a curve represent an unsaturated solution, meaning more solute can be dissolved at that specific temperature.

c. A point above the solubility curve indicates a \_\_\_\_\_ solution, meaning more solute is dissolved than possible.

3. Which salt shown on the solubility curve is the least soluble in water at 10°C? \_\_\_\_\_

4. Which of the salts shown on the graph has the greatest increase in solubility as the temperature increases from 30°C to 60°C? \_\_\_\_\_

5. Which of the salts has its solubility affected the least by a change in temperature?  
\_\_\_\_\_

6. Which two salts have the same solubility at about 85°C? \_\_\_\_\_

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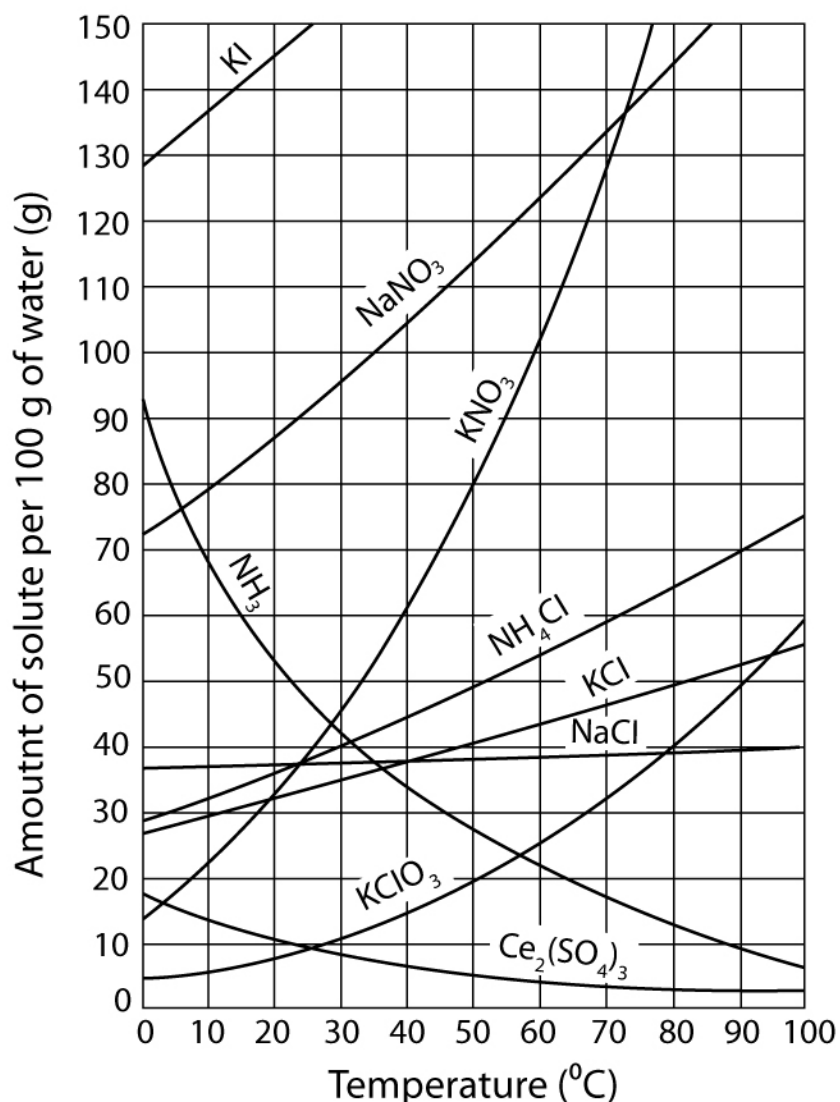


# Solubility Practice



## Answers

Look at the given solubility curve and answer the following questions.



1. What mass of solute will dissolve in 100 mL of water at the following temperatures?

a. KNO<sub>3</sub> at 70 °C 130 g

b. NaCl at 100 °C 40 g

c. NH<sub>4</sub>Cl at 90 °C 70 g

d. Which of the above three substances is most soluble in water at 15 °C? NaCl

2. Fill in the blanks.

a. On a solubility curve, the lines indicate the concentration of a saturated solution, which is the maximum amount of solute that can dissolve in the solvent at that specific temperature.

b. Values on the graph below a curve represent an unsaturated solution, meaning more solute can be dissolved at that specific temperature.

c. A point above the solubility curve indicates a supersaturated solution, meaning more solute is dissolved than possible.

3. Which salt shown on the solubility curve is the least soluble in water at 10°C? KClO<sub>3</sub>

4. Which of the salts shown on the graph has the greatest increase in solubility as the temperature increases from 30°C to 60°C? KNO<sub>3</sub>

5. Which of the salts has its solubility affected the least by a change in temperature? NaCl

6. Which two salts have the same solubility at about 85°C? HCl and KClO<sub>3</sub>