

Name : _____ Date : _____

Score : _____

Solubility and Concentration

1. Match the following. Write the correct letter in the blank provided.

1. Solute _____	A. Tells you how much solvent is dissolved in the solution
2. Solvent _____	B. The part that dissolves into the solution
3. Dissolve _____	C. Increase solubility by moving molecules faster
4. Stirring _____	D. When something is seen to disappear inside the solvent
5. Concentration _____	E. The part that dissolves something

2. Determine if the following statements are true or false.

- a. Solubility increases if you stir a solute into a solution. _____
- b. All solutes have the same solubility in a given solvent. _____
- c. There is a limit on the amount of solute that can dissolve in a given solvent. _____
- d. You can dissolve additional solutes in an unsaturated solution. _____

3. Give three ways to make sugar dissolve faster. _____ and, _____

4. Which one will dissolve faster? Circle the correct answer.

- a. Powdered sugar or granulated sugar?
- b. In hot water or in cold water?
- c. Stirred or not stirred?
- d. Large particles or small particles ?

5. 65 g of sugar is dissolved in 750 ml of water. What is the concentration of the solution?

6. Which is more concentrated: 34 g of salt dissolved in 100 ml of water or 100 g of salt in 1500 ml of water?

7. If the solubility of salt in water was determined to be 0.5 g/ml, would a solution with 50 g of salt in 150 ml of water be considered saturated?

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Solubility and Concentration

Answers

1. Match the following. Write the correct letter in the blank provided.

1. Solute <u> B </u>	A. Tells you how much solvent is dissolved in the solution
2. Solvent <u> E </u>	B. The part that dissolves into the solution
3. Dissolve <u> D </u>	C. Increase solubility by moving molecules faster
4. Stirring <u> C </u>	D. When something is seen to disappear inside the solvent
5. Concentration <u> A </u>	E. The part that dissolves something

2. Determine if the following statements are true or false.

- a. Solubility increases if you stir a solute into a solution. True
b. All solutes have the same solubility in a given solvent. False
c. There is a limit on the amount of solute that can dissolve in a given solvent. True
d. You can dissolve additional solutes in an unsaturated solution. True

3. Give three ways to make sugar dissolve faster. stirring, heating, and, crushing

4. Which one will dissolve faster? Circle the correct answer.

- a. Powdered sugar or granulated sugar? b. In hot water or in cold water?
c. Stirred or not stirred? d. Large particles or small particles ?

5. 65 g of sugar is dissolved in 750 ml of water. What is the concentration of the solution?

$$65 \text{ g} / 750 \text{ mL} = 0.0867 \text{ g/mL}$$

6. Which is more concentrated: 34 g of salt dissolved in 100 ml of water or 100 g of salt in 1500 ml of water?

$$34 \text{ g} / 100 \text{ mL} = 0.34 \text{ g/mL} \leftarrow \text{more concentrated}$$

$$100 \text{ g} / 1500 \text{ mL} = 0.067 \text{ g/mL}$$

7. If the solubility of salt in water was determined to be 0.5 g/ml, would a solution with 50 g of salt in 150 ml of water be considered saturated?

$$50 \text{ g} / 150 \text{ mL} = 0.33 \text{ g/mL}$$

No, it will not be saturated