

In Class Solutions Review

Name: _____

Date: _____ Per: _____

1. Describe the difference between unsaturated, saturated, and supersaturated solutions?
2. What are properties of electrolytes?
3. Describe what happens when a solution forms. Be sure to discuss the process of dissociation/ionization.
4. What does it mean if a solution or reaction is said to be at equilibrium?
5. What effects does dissolving a solid in water have on the freezing point and boiling point of water?
 - A. Increases both
 - B. Decreases both
 - C. Decreases freezing point and increases boiling point
 - D. Increases freezing point and decreases boiling point
6. Which of these actions will not increase the rate at which salt dissolves in water?
 - A. Increasing the temperature
 - B. Agitating the solution
 - C. Using larger particles of salt
 - D. Using smaller particles of salt
7. When sugar is dissolved in water, which term best describes the sugar?
 - A. Solute
 - B. Solvent
 - C. Concentrated
 - D. Electrolyte

8. Which of these will not affect a solution already at equilibrium?

- A. Changing the temperature
- B. Adding more water
- C. Stirring the solution
- D. Increasing the pressure

9. The equation for the decomposition reaction of CaCO_3 is shown below.



Which of these change would call the system at equilibrium to shift to the formation of more product?

- A. Increasing the temperature
- B. Adding more CO_2
- C. Removing CaO as it is formed
- D. Both A and C

10. Which of these is not a characteristic property of solutions?

- A. They are homogeneous
- B. They do not separate upon standing
- C. They can be separated by filtration
- D. They do not scatter light

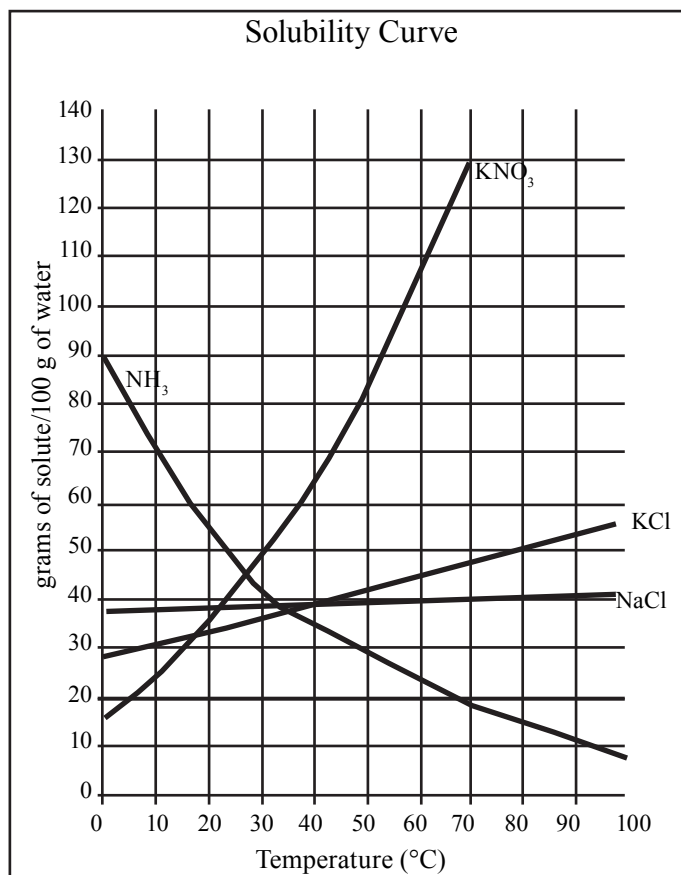
Use the solubility curve to answer questions 11-14

11. Which compound shows the greatest change in solubility over the range of the graph?

12. What is the solubility of NH_3 at 30°C ?

13. Why does the solubility of NH_3 decrease as temperature increase while the other compounds all show an increase in solubility?

14. What is solubility a measure of?



Use your textbook or knowledge from first semester to answer questions 15-17.

15. What is a suspension? Is it a solution? Explain your choice.

16. What is a colloid? Is it a solution? Explain your choice.

17. What is the Tyndall effect? How can the Tyndall effect be used to classify a mixture as a solution, suspension, or colloid?

18. If 18.25g of HCl are dissolved in enough water to make 500.0mL of solution, what is the molarity of the HCl solution?

19. What is the molality of a solution where 25g of NaCl are dissolved in 2000g of water?

20. A lab protocol requires 0.5L of a solution of 2M NaCl. Write a detailed procedure for preparing this solution. Be sure to include all lab equipment needed, the mass of NaCl needed, and the appropriate safety practices.