

Honors Chemistry
Ch 12/13 Problems

Name _____
Hour _____

Chapter 12

Fill out the following table:

Change in State	Process called...	Example
Solid → Liquid		
Solid → Gas		
Liquid → Solid		
Liquid → Gas		
Gas → Liquid		
Gas → Solid		

Chapter 13

1. a. What is a saturated solution?

b. What is an unsaturated solution?

2. Solubility = _____ OR _____ x _____ =

3. If the solubility of a solution is 0.37 g/L, how many Liters of solvent are needed to dissolve 30 grams of the solute?

4. What two variables can change the solubility of a solution?

5. Molarity = _____ OR _____ x _____ =

6. Find the molarity of a NaOH solution if 0.5 moles of NaOH are completely dissolved in 2 Liters of water.

7. How many Liters of water are needed to create a 2.5M solution if 1.2 moles of solute are in the solution?

8. How many grams of H_2SO_4 are needed to make 1 L of a 3.5M solution?

9. Molality = _____ OR $\quad \times \quad =$

10. How many moles of HNO_3 are needed to make a 4 *m* solution in 0.250 kg of water?

11. How many grams of MgCl_2 would be needed to make a 3.5 *m* solution in 0.450 kg of water?

12. Dilution equation: $\quad \times \quad = \quad \times$

13. If 0.1 L of a 12 M HCl solution is diluted to 2 L, what is the molarity of the final solution?

14. How many mL of a 16 M solution would be required to prepare 750 mL of a 0.5 M solution?