Name: Date: $\qquad$ Period: $\qquad$
AP Chemistry Chapter 12 Essentials (3 Pages)

## GASES AND THE KMT

1. How are fluids classified in chemistry?
2. Use the table on page 399 and compare the density of a substance to its molar volume as it changes from a solid to a liquid to a gas.
3. What does the term vapor refer to in chemistry?
4. What is meant by "gases are miscible"?
5. State the 5 properties of gases that were learned by scientists on pg. 400.
6. How is pressure defined and what instruments can be used to measure pressure?
7. What is standard atmospheric pressure value in atm, mm Hg , torr and kPa ?
8. State Boyles Law- is it a direct or indirect relationship?
9. State Charles Law- is it a direct or indirect relationship?
10. State the Combined Gas Law- is it a direct or indirect relationship?
11. What is Avogadro's Law and how is it used to determine the standard molar volume of a gas?

## IDEAL GAS EQUATION

12. What is an "ideal gas"?
13. What is the ideal gas equation and what does R stand for in the equation?
14. How can the ideal gas equation be used to determine the density of a gas?
15. How can the ideal gas equation be used to determine the molecular weight of a gas?
16. How can the ideal gas equation be used to determine the molecular formula of a gas?
17. What is the "partial pressure of a gas" and how does it relate to Dalton's Law.
18. How to the mole fractions compare to the partial pressures of a mixture of ideal gases?
19. What is the complication that arises when collecting a gas over water and how is it overcome?
20. How can you convert the mass of a gas into volume of a gas?
21. What is Gay-Lussac's Law of Combining Volumes?
