

**The Ideal Gas Law 2**

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

- 1) What is the density of carbon dioxide gas at standard temperature and pressure?
- 2) A common, unknown gas has a density of 1.25 g/L at conditions of 14.9 psi and 3.5 °C. What is the molar mass of the substance?
- 3) Determine the density of carbon tetrachloride gas when placed in a balloon at 72 °F and 745 mm Hg.
- 4) At what pressure is a tank of He when the temperature of the tank is 295 K and the density of the gas is 4.2 g/L?
- 5) How many grams of oxygen gas is placed in a container with a pressure of 455 kPa, a temperature of 305 K and a volume of 871 mL?
- 6) A gas at a pressure of 1.5 atm and a temperature of 19 °C is cooled to -58 °C. What would the new pressure be in a rigid container?
- 7) What is the density of nitrogen dioxide gas at -30 °C and 0.8 atm?

Answers: 1) 1.96 g/L    3) 6.23 g/L    6) 1.1 atm