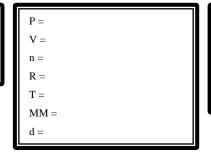
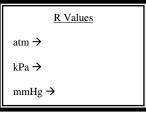
Name: Period: Seat#:

$$PV = nRT$$

$$MM = \frac{dRT}{P}$$





## **Directions:**

First – label the variables and list the R values in the boxes on the right side of the worksheet. Then - solve

the following Problems below. Assume all number are 3 significant figures. Remember to show your work!

- **1)** How many moles of oxygen will occupy a volume of 2.50 liters at 1.20 atm and 25°C? <u>0.123 mol</u>
- **2)** What volume will 2.00 moles of nitrogen occupy at 720. torr and 20.°C? <u>50.8 L</u>

- 3) What pressure will be exerted by 25.0 g of CO<sub>2</sub> at temperature of 25°C and a volume of 500. mL? 27.8
- **4)** At what temperature will 5.00 g of Cl<sub>2</sub> exert a pressure of 900. torr at a volume of 750. mL? 153 K/-120°C

- **5)** What is the density of NH<sub>3</sub> at 800. torr and 25°C? 0.733 g/L
- **6)** If the density of a gas is 1.2 g/L at 745 torr and 20. °C, what is its molar mass? 29.4 g/mol

## Dougherty Valley HS Chemistry - AP Gas Laws – Ideal Gas Law

7)	How many moles of nitrogen gas will occupy a volume of 347 mL at 6680 torr and 27°C? <u>0.124 mole</u>	8)	What volume will 454 grams (1 lb) of hydrogen occupy at 1.05 atm and 25°C? 5240 L
9)	Find the number of grams of CO <sub>2</sub> that exert a pressure of 785 torr at a volume of 32.5 L and a temperature of 32°C. <u>59.0 g CO<sub>2</sub></u>	10)	An elemental gas has a mass of 10.3 g. If the volume is 58.4 L and the pressure is 758 torr at a temperature of 2.5°C, what is the gas? 4.00 g/mol He