**Dougherty Valley HS AP Chemistry**

**WORKSHEET #6**

**Gas Laws – Ideal Gas Law**

Name: Date: Period: Seat #:

**PV = nRT**

P = Pressure

V = Volume in Liters

n = number of moles

R = Gas constant

T = Temperature in Kelvin

|  |  |
| --- | --- |
| How many moles of oxygen will occupy a volume of 2.50 liters at 1.20 atm and 25°C? 0.123 mol | What volume will 2.00 moles of nitrogen occupy at 720. torr and 20.°C? 50.8 L |
| What pressure will be exerted by 25.0 g of CO2 at temperature of 25°C and a volume of 500. mL? 27.8 atm | At what temperature will 5.00 g of Cl2 exert a pressure of 900. torr at a volume of 750. mL? 153 K/ -120°C |
| What is the density of NH3 at 800. torr and 25°C? 0.733 g/L | 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 |
| How many moles of nitrogen gas will occupy a volume of 347 mL at 6680 torr and 27°C? 0.124 mole | What volume will 454 grams (1 lb) of hydrogen occupy at 1.05 atm and 25°C? 5240 L |
| Find the number of grams of CO2 that exert a pressure of 785 torr at a volume of 32.5 L and a temperature of 32°C. 59.0 g CO2  | 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 |