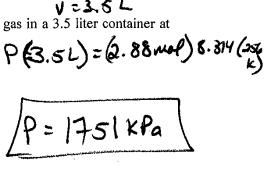
	NAME Koy b KPaper
* .	CAS LAWS
	Remember: 1 atm = 101.3 kPa = 1 atm = 760 mmHg $R = 0.0821$ L atm/mol K
	1) Define each of the three main variables for a gas.  P-Force of gas ullistons on which were of container  T-ave. Knells Energy of gas particles V=Space the gas takes up  2) If temperature is increased while volume is held constant, what will happen to the pressure of
	T-ave. Kinetic Energy of gas particles V=Space the gas takes up  2) If temperature is increased white volume is held constant, what will happen to the pressure of a gas?  P. will also Mcrease
	T. WIT also increase
	3) If the temperature is held constant while the pressure on a gas is increased, what will happen to the volume?  Volume will decrease
	4) If volume and temperature are held constant, what will happen to the pressure when more gas is added to the container?  PRIME INCREASES
* \$	Ideal Gas Law:  5) Write the Ideal Gas Law. What units does each part of the law need to have? (Hint: Look at the units of R, the constant)  P= atn/kPa T= Kelvin  V= hitess  R = (atn/kh)·L  n= moles
	6) 2.3 moles of hydrogen gas are in a 250. mL container. If the pressure in the container is 1.4 atm, what is the temperature of the gas? $V = 250 \text{ nL} = 0.350 \text{ L}$ $P = 1.4 \text{ atm.} 101.3 \text{ kPa}$
(141	(82KPn)(0.250L) = (2.3mol)(8.314)(T) [T=1.85K]
	7) A 1.5 L container has a pressure of 120 kPa at a temperature of 25 °C. How many moles of gas are in the container?  7
120	KPa (1.5L) = n(8.314) (298K)
	n=0.073 miles
	8) If 0.57 grams of carbon dioxide is placed in a 250 milliliter container at 40 °C, what will be the pressure of the container?  V = 0.250L  T = 40+273 = 313 K
į	n = 0.57g (Oz   mol (Oz = 0.0 B mol 44 g (Oz
	D-133 KM
•	P(0.250L) = 0.013 mor (8.314)(313K)



9) 3.4 grams of oxygen gas is mixed with 5.6 grams of hydrogen gas in a 3.5 liter container at 256 K. What is the total pressure in the container?

10) Write out the combined gas law used when any of the big three variables are changing in a gas problem

$$\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$$

11) While temperature MUST be in Kelvin for these problems, the units for volume and pressure

13) The pressure of a 1.0 L flexible container is decreased from 1.5 atm to .85 atm while the temperature is held constant. What is the new volume of the container? 1. Satm = P, -> 151.95 k/g

14) If a sample of gas in a 0.55 L balloon is heated from 135 K to 255 K while pressure is kept at 105 HPa, what will happen to the volume of the balloon?

$$0.55L - V_2$$
  $V_2 = 1.04L$ 

15) A 1.4 L sample of NO gas at 23 °C and 1.2 atm is heated to 45 °C while the volume increases to 1.6 L. What is the new pressure of the gas?

$$\frac{(121.56 \text{ kPa})(1.4L)}{296 \text{ k}} = \frac{P_2(1.6L)}{318 \text{ k}}$$