$$PV = nRT$$

$$\frac{PV}{1} = \frac{gRT}{MW}$$

$$\frac{MW}{1} = \frac{gRT}{PV}$$

$$PV = nRT \qquad d = \frac{mass}{Vol}$$

$$\frac{PV}{1} = \frac{gRT}{MW}$$

$$\frac{P(MW)}{RT} = \frac{g}{V} = d$$

Dec 6-7:55 AM

$$\text{Molarity} = \frac{\text{moles}}{l} \qquad \frac{n}{V}$$

$$\frac{PV}{1} = \frac{nRT}{1}$$

$$\frac{P}{RT} = \frac{n}{V} = M$$

Dec 6-8:48 AM

Dalton's Law of partial Pressures

KFC

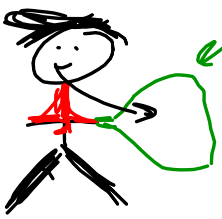
Chicken

2 wings
2 legs
2 Thighs
2 Breast

Rotissere (all from same chicken)

$\Sigma = 1$ chicken

Dec 6-8:50 AM



Balloon ⇒ AIR

$P_{AIR} = 32$ psi

std car tire

AIR = $O_{2(g)} + N_{2(g)} + CO_{2(g)}$

$P_T = \Sigma$ Partial Pressures

$P_T = P_{O_2} + P_{N_2} + P_{CO_2}$

Dec 6-8:54 AM

$$P_{AIR} V_{AIR} = n_{AIR} R T_{AIR}$$ ← TOTAL

$$P_{O_2} V_{air} = n_{O_2} R T_{AIR}$$ ← Same

Same (Vair)

Gases fill entire container

Dec 6-8:59 AM

$$P_T V_T = n_T R T_T \qquad P_{O_2} V_{O_2} = n_{O_2} R T_{O_2}$$

Same

$$\frac{P_{O_2}}{P_T} = \frac{\frac{n_{O_2} R T_{O_2}}{V_{O_2}}}{\frac{n_T R T_T}{V_T}}$$

$$\frac{P_{O_2}}{P_T} = \frac{n_{O_2}}{n_T} \Rightarrow P_{O_2} = \left(\frac{n_{O_2}}{n_{Total}}\right) P_T$$

$\frac{\text{Part}}{\text{Whole}}$ = Mole fraction

fraction of whole thing

Dec 6-9:02 AM

6g O_2, 9g CH_4, V 15 L at 0°C

T = 273

R = 0.08206

Find P_{O_2}, P_{CH_4}, P_T

$\frac{6\text{g } O_2}{} \left| \frac{1 \text{ mole } O_2}{32\text{g } O_2} \right. = 0.188 \text{ mole } O_2$

$P_{O_2} = \frac{nRT}{V} = \frac{(0.188)(0.08206)(273)}{15}$

$P_{O_2} = 0.2818 \text{ atm}$

$\frac{9\text{g } CH_4}{} \left| \frac{1 \text{ mole } CH_4}{16\text{g } CH_4} \right. = 0.563 \text{ mole } CH_4$

PV = nRT

$P_{CH_4} = 0.841 \text{ atm}$

Dec 6-9:08 AM

10/43 + 62

Dec 6-9:15 AM