Equations

① $\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$

② $PV = nRT$

③ $\frac{PV}{1} = \frac{gRT}{MW}$

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

④ $d = \frac{P(MW)}{RT}$

DALTON

⑤ $P_T = \sum$ Partial Pressures

$P_T = P_{gas_1} + P_{gas_2} + \ldots$

⑥ $P_{dry\ gas} = P_{Total} - P_{H_2O}$

Chart by Temp

Constant by Temp

Dec 9-7:58 AM

Balloon

$$P_{N_2} = X_{N_2} \, P_T$$

Partial Pressure N_2 "in balloon"

Mole Fraction

$\frac{\text{moles } N_2}{\text{Total moles Present}}$

Total Pressure "in balloon"

$\frac{\text{Moles } N_2}{\text{Moles } O_2 + \text{Moles } N_2 + \text{Moles } CO_2}$

Dec 9-8:22 AM

Dec 9-8:42 AM

Container that has 0.5 moles $X_{(g)}$ 2.5 moles $Y_{(g)}$

$P_T = 10\text{ atm}$

$X_{(g)}$
$Y_{(g)}$
$P_T = 10\text{ atm}.$

$P_x = 1.67$

$P_y = 8.33$

$P_x = X_x P_T$

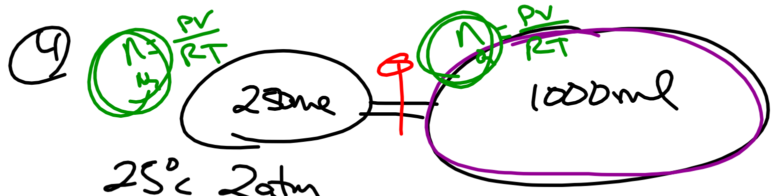
$P_x = \frac{0.5}{3}(10)$

$P_x = 1.67\text{ atm}$

$X = \frac{\text{Part mole}}{\text{Whole mole}}$

Dec 9-8:25 AM

(9)



25°c, 2atm
N_2

25°c, 4.5atm
O_2

once open
new volume
is 1250ml

$P_1V_1 = P_2V_2$

$(2)(250) = P(1250)$

$P_{N_2} = 0.4atm$

$P_1V_1 = P_2V_2$

$(4.5)(1000) = P_2(1250)$

$P_{O_2} = 3.6atm$

$P_T = 4atm$

$P_TV_T = n_TRT$

1.25 l

298K
25°c

Dec 9-8:33 AM

$P_{Ar} = X_{Ar} P_T$

$4.9 = X_{Ar} (8.4)$

He 1.5
N_2 2.0

8.4 - 3.5 = 4.9

Dec 9-8:46 AM

10 / 60 + 68

Dec 9-8:47 AM