

10.23 $P_{atm} = 0.985 \text{ atm} \quad | \quad \frac{760 \text{ mmHg}}{1 \text{ atm}} = 748.6 \text{ mmHg}$

② $P_{gas} = 228.6 \text{ mmHg}$

$P_{atm} = 748.6 \text{ mmHg}$

$h = 52 \text{ cm}$
 520 mm

③ $P_{gas} = 67 \text{ mm}$
greater $P = 748.6$

67mm

Dec 7-7:47 AM

Direct $\frac{P}{T} = \text{constant}$ Gay-Lussac's $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{50}{100}$

$\frac{V}{T} = \text{constant}$ Charles'

$P \downarrow$ $V \uparrow$

$P \downarrow$ $V \uparrow$

$\frac{PV}{T} = \text{constant}$ Boyle's Indirect $\left(\frac{PV}{T}\right)$

$P \uparrow$ $V \downarrow$

$\downarrow 2 \left(\begin{matrix} 10 \times 2 = \\ 5 \times 4 \end{matrix} \right) \downarrow 2$

$\frac{P}{T} \downarrow$ $\frac{V}{T} \downarrow$

Dec 7-8:07 AM

$$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$$

TEMP MUST BE IN KELVIN

Change in n system

Dec 7-8:21 AM

$$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$$

$$\frac{252 (1)(6)}{0.45 \cdot 295} = \frac{\cancel{0.45} (V_2)}{\cancel{252}}$$

22°C →

$V_2 = 11.39 \text{ L}$

Dec 7-8:42 AM

Universal Gas Constant

$PV = nRT$

Pressure →
Volume ↗

↑
Moles

↑
Temp
in
KELVIN

Ideal Gas
EQN

Real Gas
↓P, ↑V, ↑T

$R = 0.08206$

Dec 7-8:48 AM

$PV = nRT$

$R = \frac{PV}{nT} = \frac{1 \cdot \text{atm}}{1 \text{ mole} \cdot \text{K}} = 0.08206$

Find P when. ⇒ 22g of O_2 in 10l container at 300K

$P = \frac{nRT}{V} = \frac{(0.5)(0.08206)(300)}{10}$

$P = 1.2319 \text{ atm}$

$n = \frac{g}{\text{MW}}$

Dec 7-8:53 AM

Find molar mass

$$PV = nRT$$

$$\frac{PV}{1} = \frac{(g)RT}{(MW)}$$

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

$\frac{n}{1} = \frac{g}{MW}$

Dec 7-9:01 AM

Find Density of a gas

$$D = \frac{\text{mass}}{\text{Volume}} = \frac{g}{V}$$

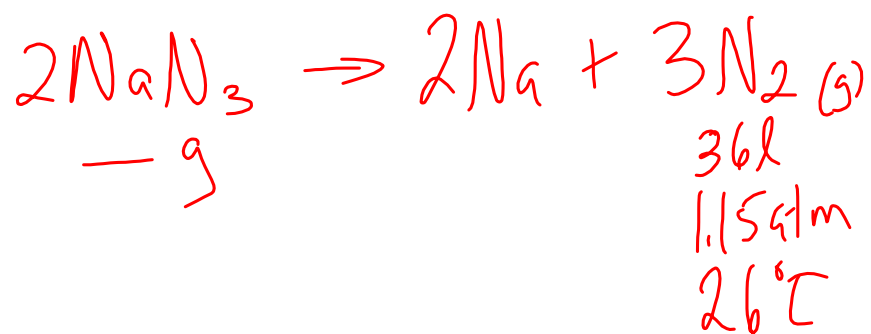
$$PV = nRT$$

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

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

D =

Dec 7-9:03 AM



$$PV = nRT$$
$$n = \frac{PV}{RT}$$

Dec 7-9:13 AM

$$10/34 \text{ atm}, 38,40$$

Dec 7-9:17 AM