

$$R = 0.08206 \frac{\text{L} \cdot \text{atm}}{\text{mole} \cdot \text{K}}$$

$$8.314 \frac{\text{J}}{\text{mole} \cdot \text{K}}$$

$$\frac{62.36 \text{ L} \cdot \text{torr}}{\text{mole} \cdot \text{K}}$$

Unit
Specific!

Dec 7-7:29 AM

$$PV = nRT$$

$$R = \frac{PV}{nT} \quad \frac{\text{atm} \cdot \text{L}}{\text{mole} \cdot \text{K}}$$

Dec 7-8:09 AM

Density of a gas

$PV = nRT$

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

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

Max knows 😊

$\frac{\text{density}}{1} = \frac{\text{mass}}{\text{Volume}}$ $\frac{g}{V}$

Math + Max knows

$\frac{\text{Moles}}{1} = \frac{g}{MW}$

Dec 7-8:10 AM

What substance is it? Solve for MW:

Max says ↗

$PV = nRT$

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

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

Dec 7-8:18 AM

Balloon sealed 6L, 1atm 27°C \leftarrow initial
 $\rightarrow 295\text{K}$
 way up high. ? L, 0.45atm -21°C \leftarrow Final
 $\rightarrow 252\text{K}$

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

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

Dec 7-8:20 AM

What is the density of Carbon tetrachloride vapor
 at 714 torr and 125°C ? $\rightarrow 398\text{K}$

$$\frac{714 \text{ torr}}{760 \text{ torr}} = 0.94 \text{ atm} \quad \text{C Cl}_4$$

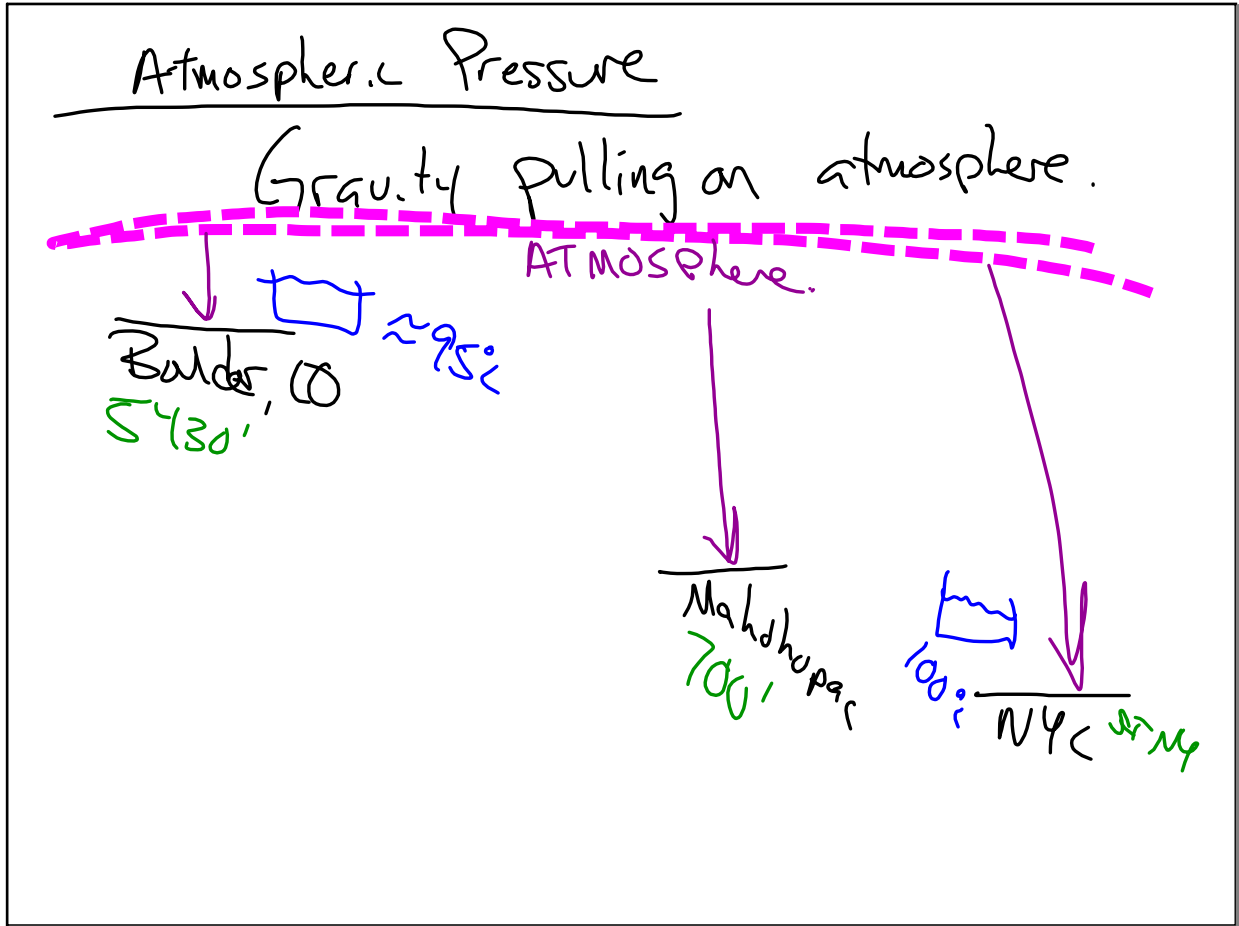
$$PV = nRT$$

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

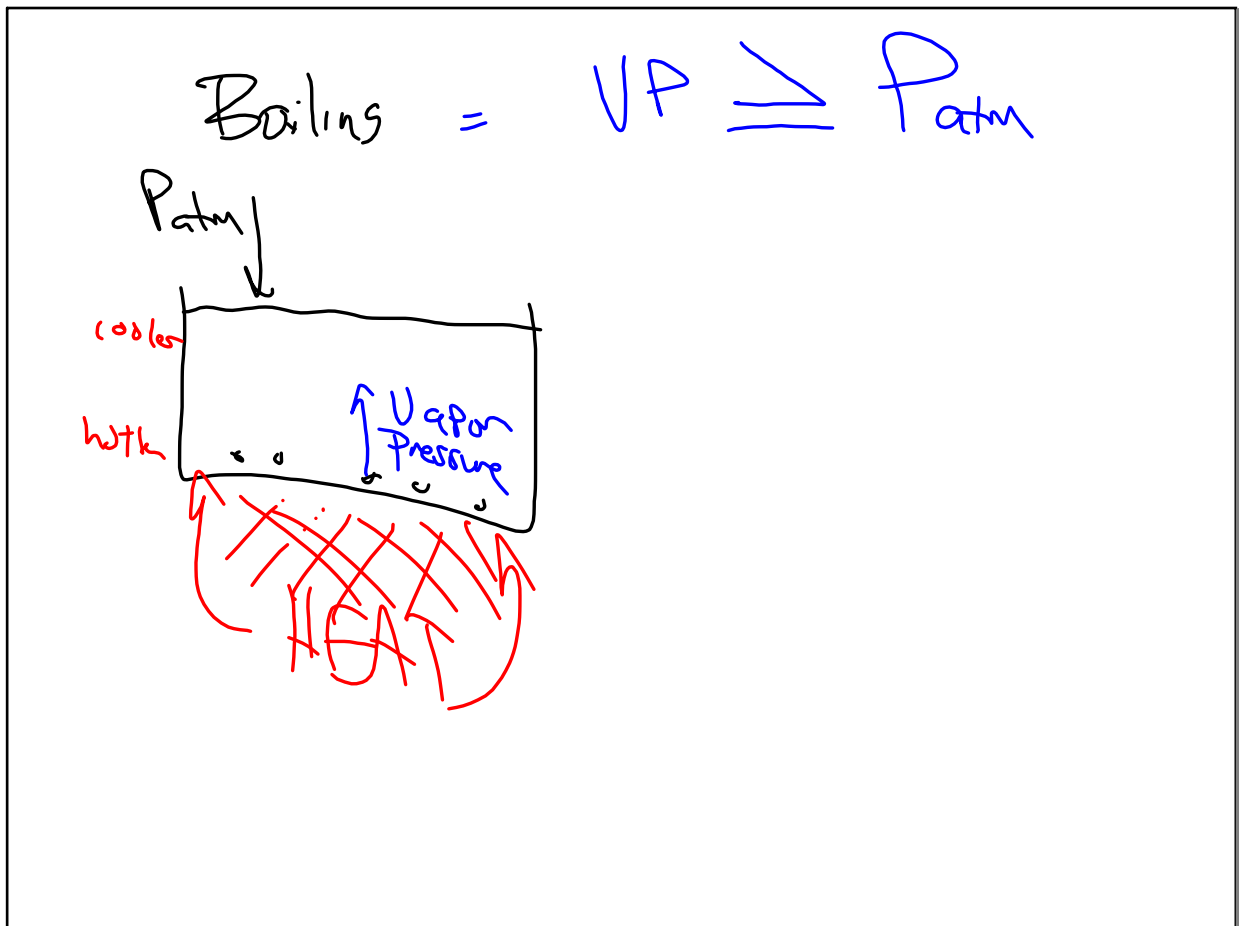
$$d = \frac{g}{V} = \frac{P(\text{MW})}{RT}$$

$$\frac{0.94(154)}{0.08206(398)} \approx 4.43 \text{ g/L}$$

Dec 7-8:25 AM



Dec 7-8:31 AM



Dec 7-8:36 AM

10 / 40 + 50

Dec 7-8:46 AM