(P17) (10) $V_1 = ?$ $T = 0^\circ C = 273\ K$

$V_2 = 482\ l$ $T = 27^\circ C = 300\ K$ (+273)

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

$$\frac{273}{1} * \frac{V_1}{273} = \frac{482}{300} * \frac{273}{1}$$

$V_1 = 434.62\ l$

Feb 26-9:40 AM

(8) $65\ l, 52^\circ C$

$72\ l$, Temp

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

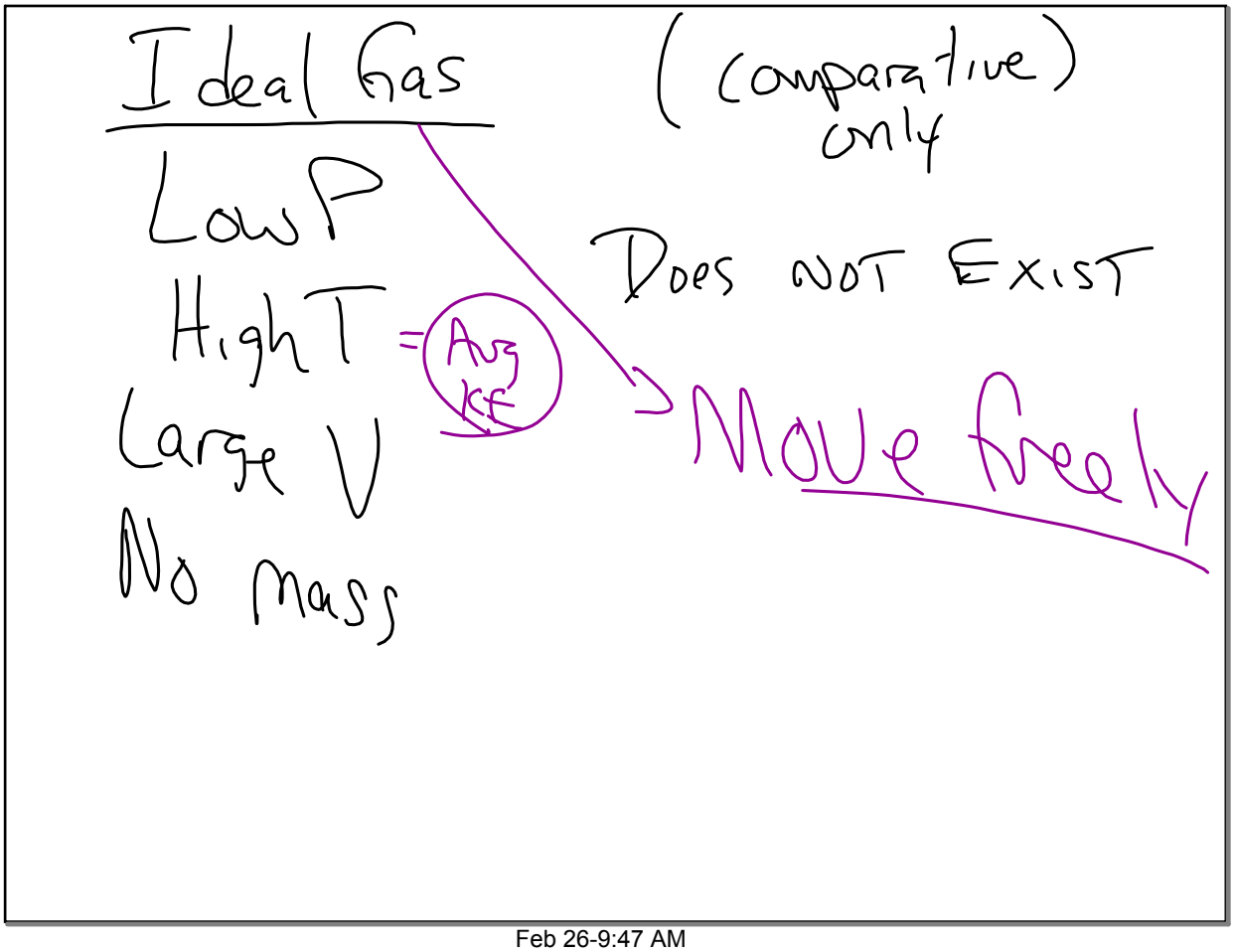
$$\frac{65}{325} = \frac{72}{T}$$

$$65T = (72)(325)$$

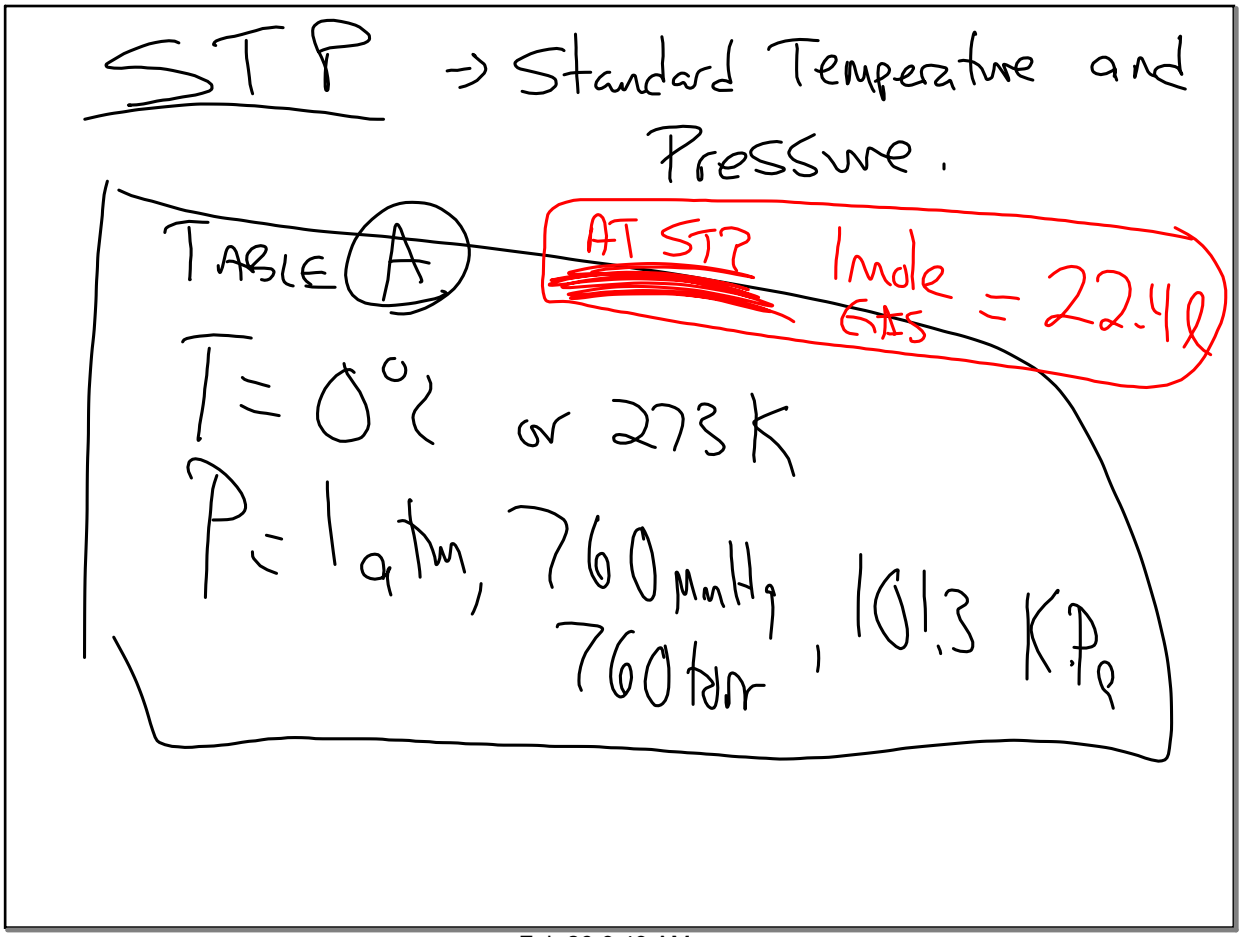
$$65 \qquad 65$$

$87^\circ C \leftarrow T = 360\ K$

Feb 26-9:44 AM



Feb 26-9:47 AM



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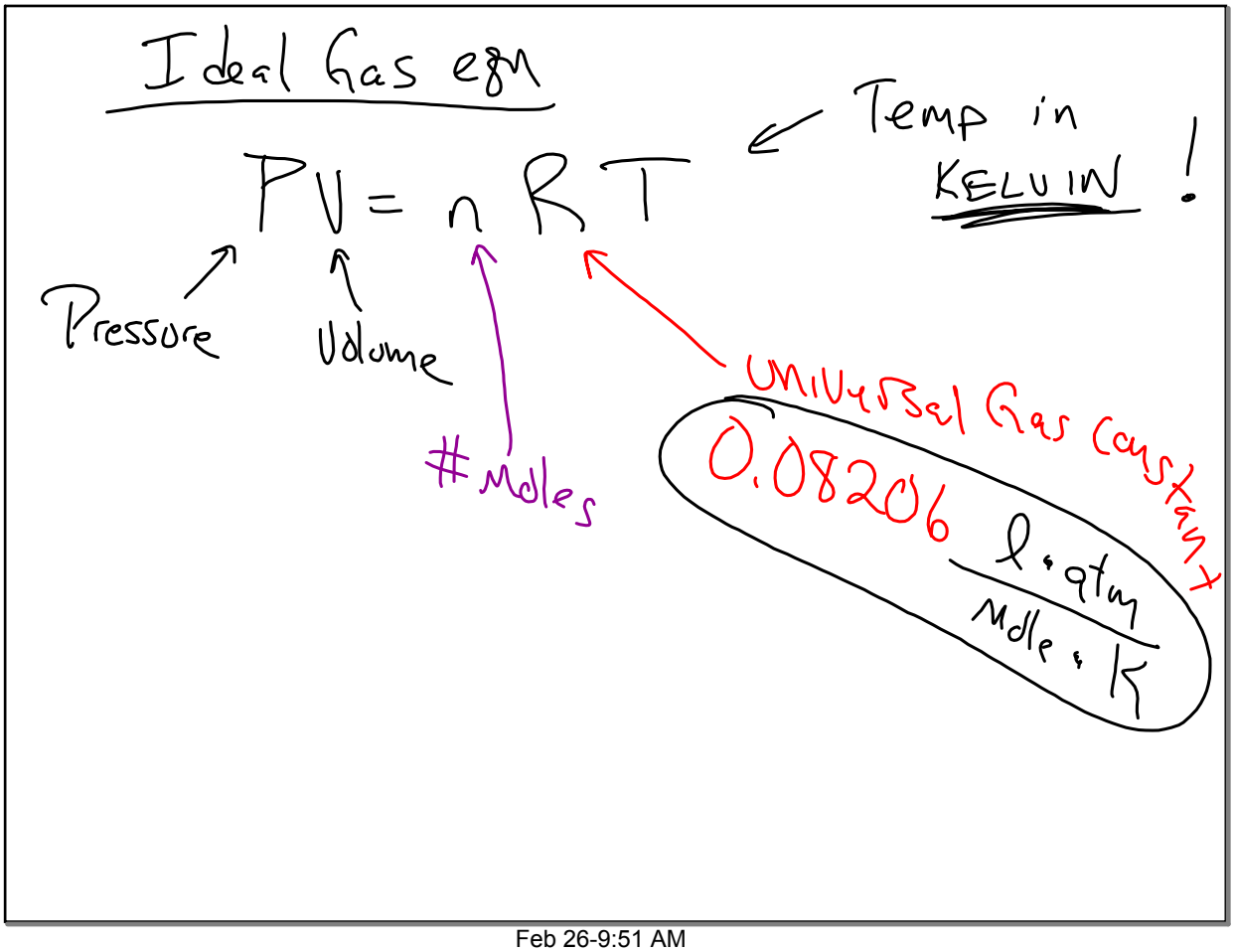

Feb 26-9:51 AM

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

$$R = \frac{PV}{nT} = \frac{atm \cdot l}{mole \cdot K}$$

0.08206

Feb 26-9:54 AM

$4Fe + 3O_2 \rightarrow 2Fe_2O_3$

214 g

298K = 25°C = 25

200 kPa

$\frac{200\ kPa}{101.3} \left| \frac{1\ atm}{} \right. = 1.97\ atm$

$\frac{2.014\ mole\ O_2}{3\ mole\ O_2} \left| \frac{2\ mole\ Fe_2O_3}{1\ mole\ Fe_2O_3} \right| \frac{160\ g\ Fe_2O_3}{}$

$PV = nRT$

$n = \frac{PV}{RT} = \frac{(1.97)(25)}{(0.08206)(298)} = 2.014\ mole\ O_2$

Feb 26-9:57 AM

P21 / 1, 3, 5

Feb 26-10:03 AM