ideal gas law

Supplemental to lecture - may be useful but will not appear on final exam (regular format)

$$PV = nRT$$

$$M = mw$$

$$n = \frac{mass}{M}$$

$$PV = \left(\frac{mass}{M}\right)RT$$

$$M = \frac{(mass)(R)(T)}{PV}$$ remember

$R = 0.08206 \frac{L\,atm}{mol\,K}$, T must be in K

P must be in atm

V must in liter

mass must be in grams

molecular weight

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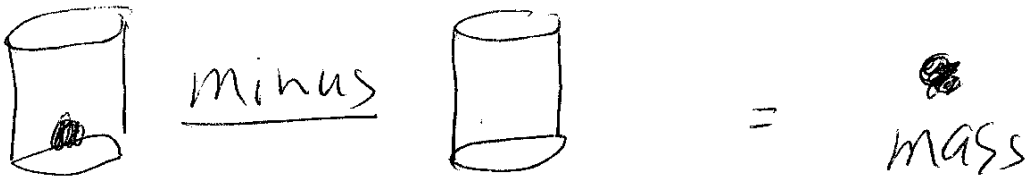
look at example 3.13 & 3.14 in your book (p. 93 & p. 94)



You can always divide entire $PV=nRT$ equation by another $PV=nRT$ equation * If $P_{erra} = 0.9\,P_{correct}$ or could be $1.1\,P_{correct}$

$$M_{wrong} = \frac{(mass)RT}{(0.90\,P_{correct})(V)}$$

$$M_{correct} = \frac{(mass)RT}{(P_{correct})(V)}$$