

Feb 4-7:56 AM

(20) $\frac{42.4\text{gC}}{12\text{gC}} = 3.53\text{moleC} / 3.44 = 1.03$ C

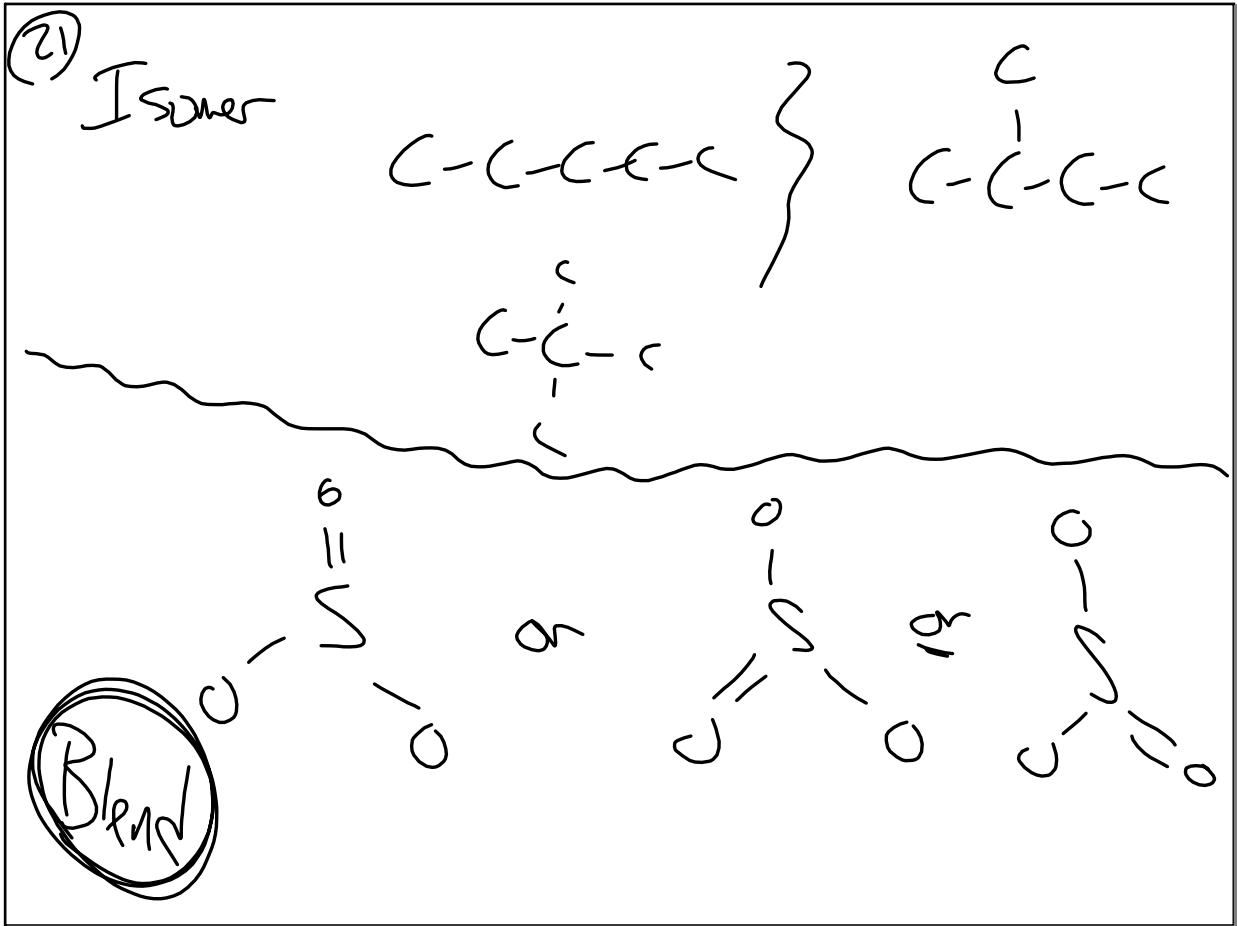
$\frac{3.47\text{gH}}{1\text{gH}} = 3.47\text{moleH} / 3.44 = 1.01$ H

$\frac{55.19\text{gO}}{16\text{gO}} = 3.44\text{moleO} / 3.44 = 1$ O

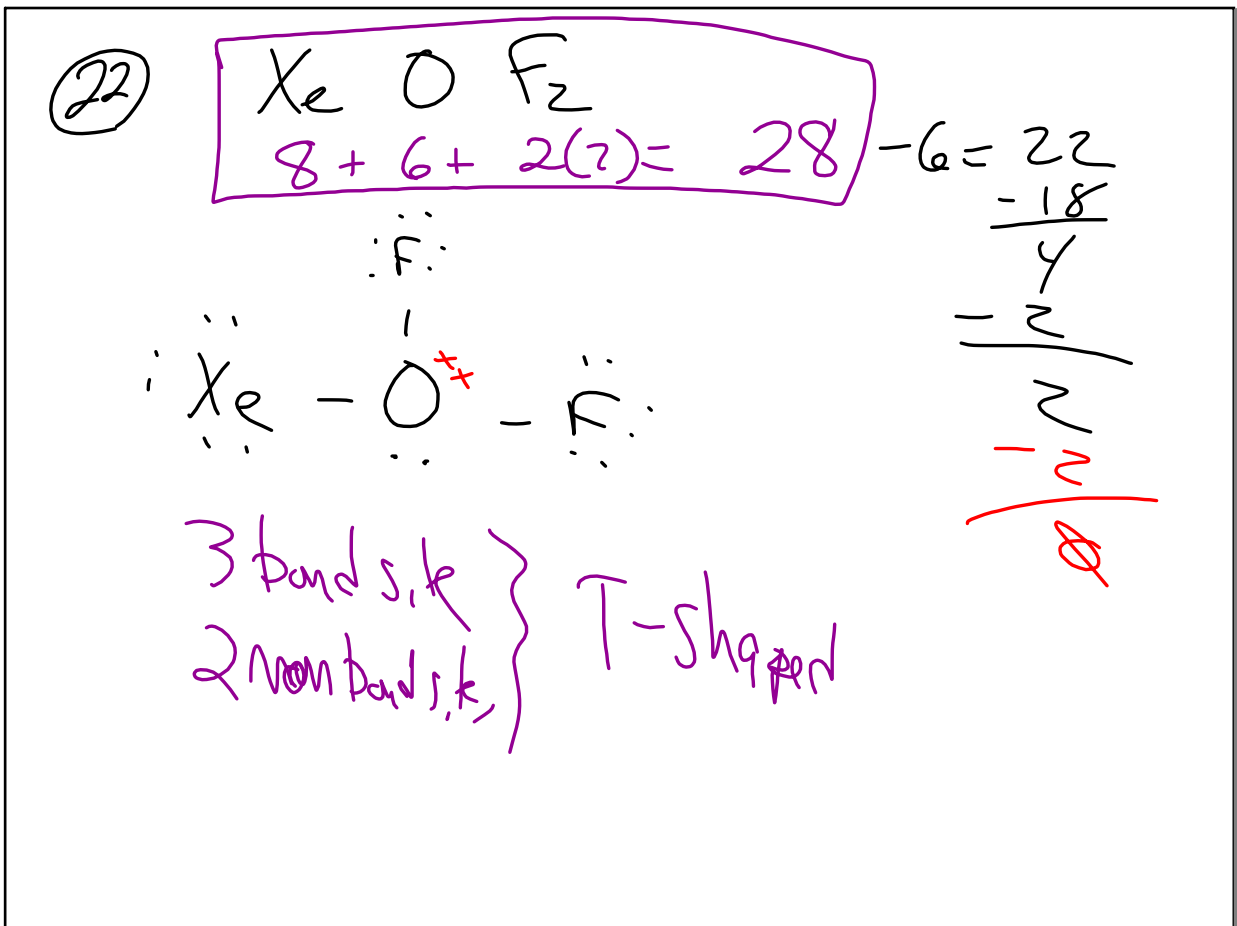
$\text{C}_4\text{H}_4\text{O}_4$
 $12 + 1 + 16 = 29$
 $\frac{29\text{g}}{\text{mole}}$
 $\frac{116}{29} = 4$

$\frac{5.8\text{g}}{0.05\text{mole}} = 116\text{g/mole}$

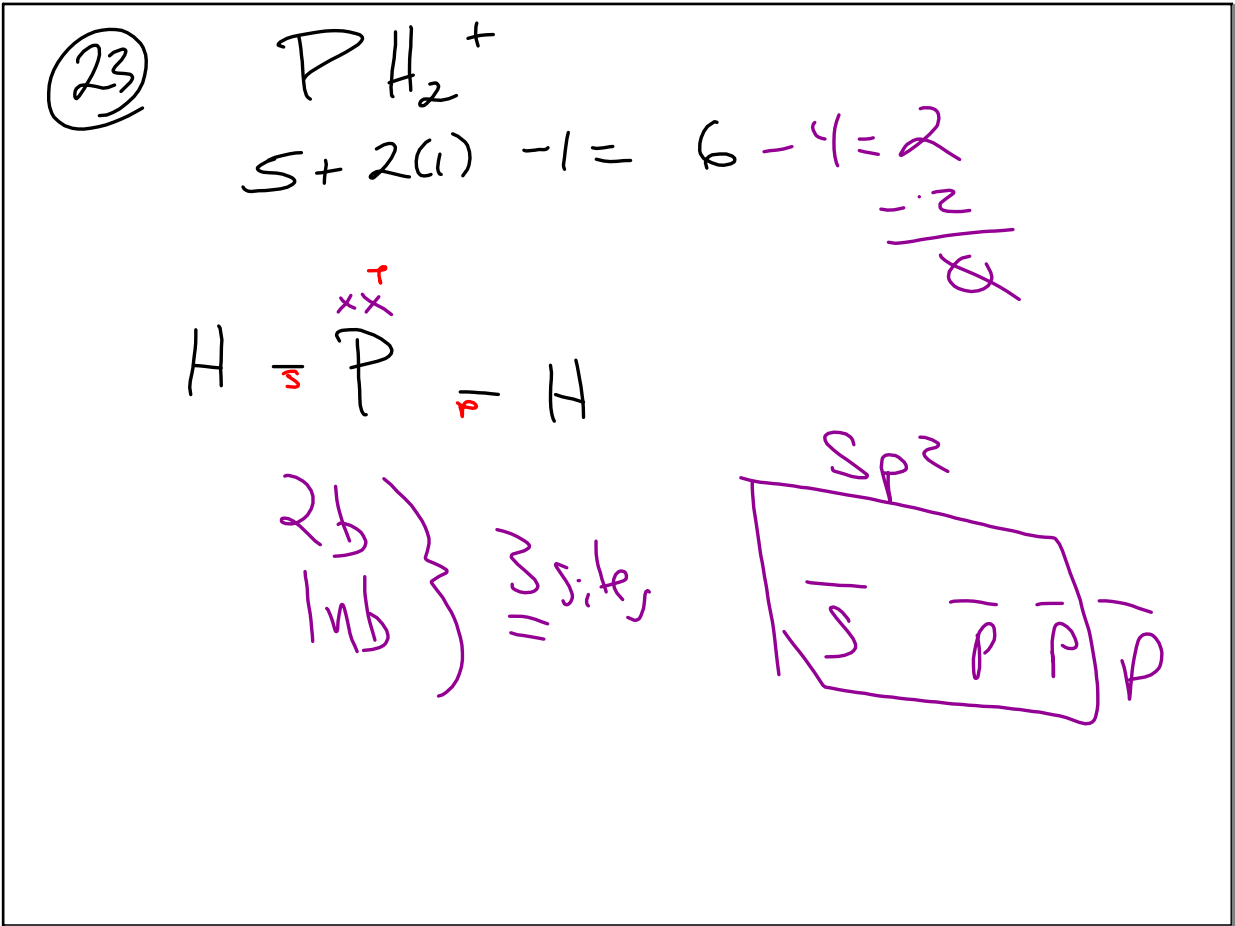
Feb 4-8:18 AM



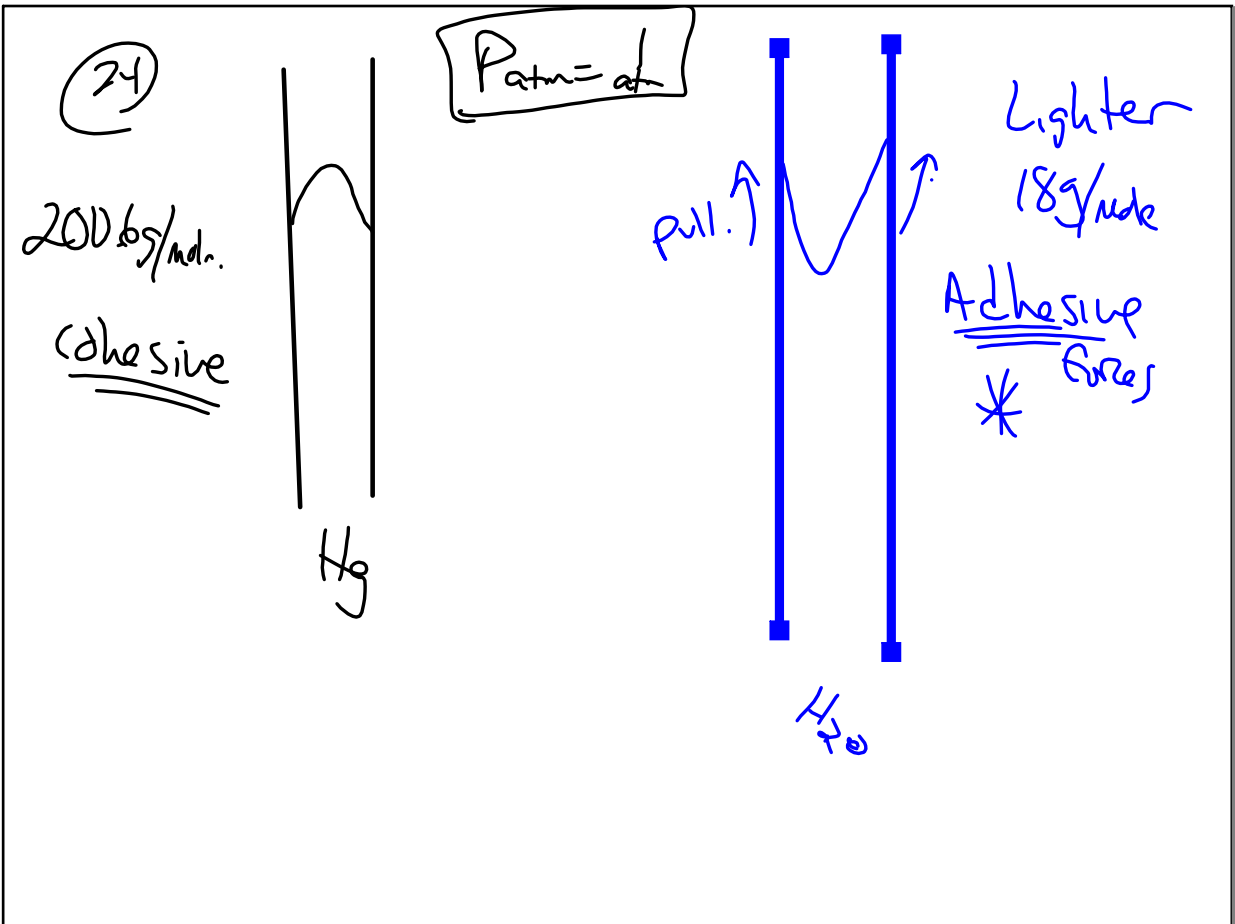
Feb 4-8:23 AM



Feb 4-8:25 AM



Feb 4-8:28 AM



Feb 4-8:31 AM

$14 + 3(1) = 17 \text{ g/mole}$
 $\text{NH}_3(\text{g})$
 $V = 4.32 \text{ L}$
 $P = 837 \text{ torr} \cdot \frac{837}{760} = 1.1 \text{ atm}$
 $T = 45^\circ\text{C} + 273 = 318 \text{ K}$

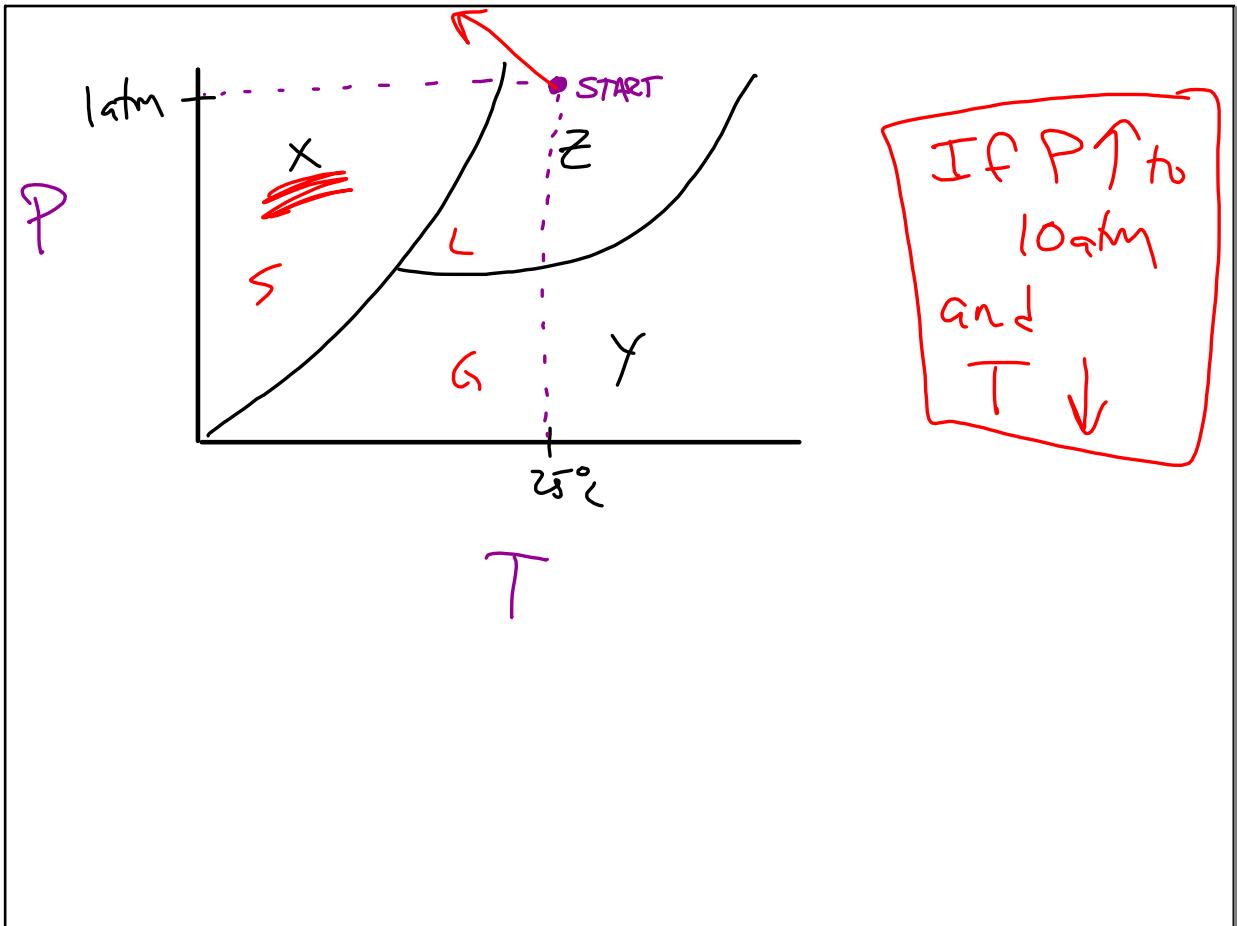
Find density $\frac{g}{V}$

$PV = nRT$
 $\frac{PV}{T} = \frac{gRT}{MW}$

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

$\frac{(1.1)(17)}{(0.08206)(318)} = 0.217 \text{ g/L}$

Feb 4-8:34 AM



(29) $E = ?$ $\lambda = 285 \text{ nm}$

$E = hf$
 $c = f\lambda$
 $f = \frac{c}{\lambda}$

$E = \frac{hc}{\lambda} = \frac{(6.63 \times 10^{-34}) (3 \times 10^8)}{285 \times 10^{-9} \text{ m}}$

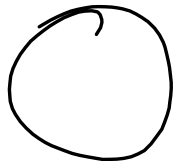
$E = 6.98 \times 10^{-19} \text{ J}$

Feb 4-8:44 AM

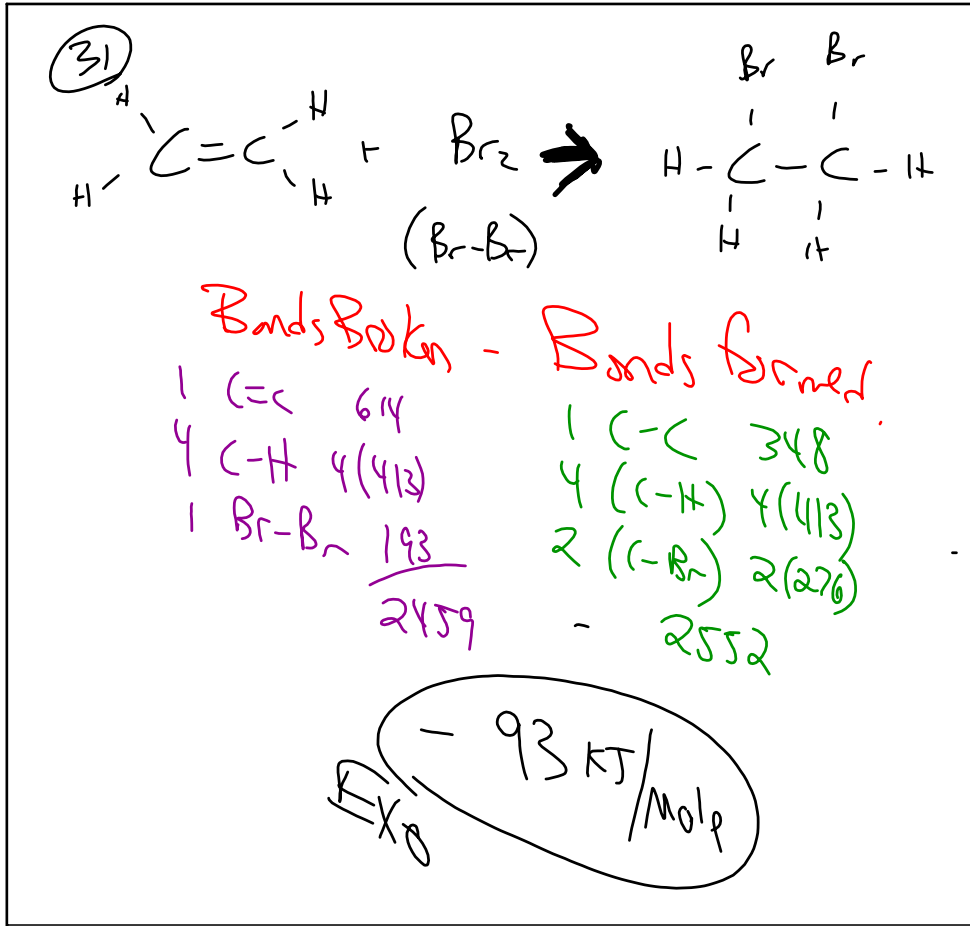
(30) $l = 0$

S	p	d	f
0	1	2	3

Orbital



Feb 4-8:46 AM



Feb 4-8:50 AM

Colligative Prop Lab

BP H₂O = 100°C
 Pure

+2g
 + 2g NaCl = 101°C

+2g
 4g NaCl = 101.8°C

$\Delta T = T_f - T_i$
 Experimental

$\Delta T = 1^\circ\text{C}$
 2g NaCl

$\Delta T = 1.8^\circ\text{C}$
 4g NaCl

% Error = $\frac{\text{Actual} - \text{Experimental}}{\text{Actual}} \times 100$

Feb 4-9:03 AM

Find Actual (calculated) ΔT 25g H₂O

$\Delta T = (K_b * m) i$

NaCl
 $i = 2$

NaCl = (0.52 * 1.38) 2

$\frac{M}{1} = \frac{\text{moles solute}}{\text{kg soln.}} = \frac{\frac{g}{\text{MW}}}{\text{kg}}$

$\frac{M}{1} = \frac{2}{58} = \frac{0.025}{1} = 1.38m$

$\Delta T = 1.44^\circ\text{C}$ 2g NaCl

$\Delta T = 2.88^\circ\text{C}$ 4g NaCl

Feb 4-9:05 AM

① NaCl

$i=3$ ② CaCl₂ -

$i=2$ ③ CuSO₄ · 5H₂O -

$i=3$ ④ BaCl₂ -

$i=1$ ⑤ C₆H₁₂O₆ -

HW
Calc Actual ΔT
for 2g

Feb 4-9:17 AM

Chap 14 Chemical Kinetics

Rate of reaction

CHE 116 Lec
117 Lab

Mechanism \rightarrow Sequence of events
that a reaction goes through React \rightarrow Prod.

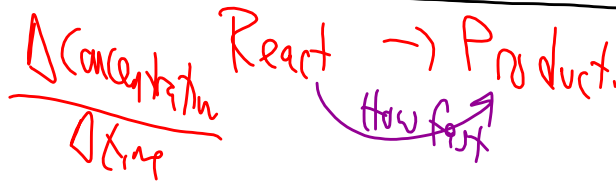
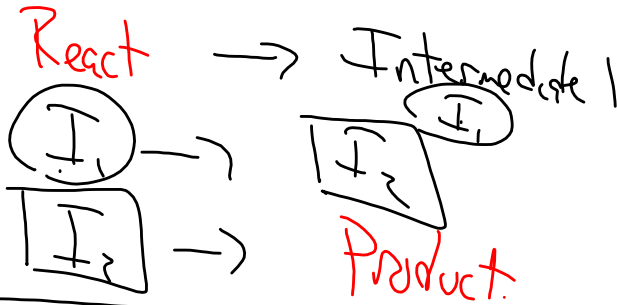
Hess's Law

30mph

31mph

20mph

Molecules
/ Sep



Feb 4-9:21 AM