(30) 200ml Acetic Acid

$HC_2H_3O_2$

HoAc

KOH

have 45.7 ml Burette

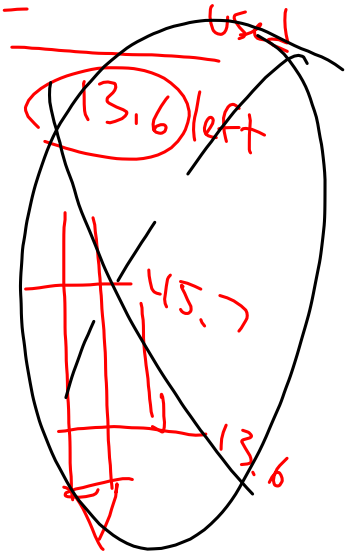
0.2M KOH

A B

$nM\ell = nM\ell$

$(1)M(200) = (1)(0.2)(31.6)$

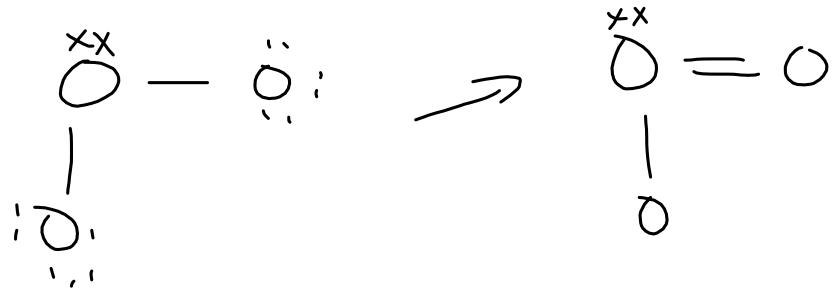
$M = 0.0316M$



Feb 1-7:35 AM

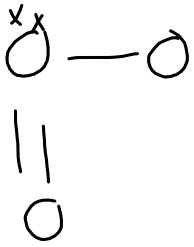
(25) O_3

$3(6) = 18 - 4 = 14 - 12 = 2 - 2 = 0$



Formal charge $= (\text{valence}) - (\text{all nb} + \frac{1}{2}\text{b})$

$6 - (2+3) = +1$



Feb 1-8:08 AM

EC1

CO_2	0.65
H_2	0.25
HCl	0.054
HF	0.028
	0.982

$1 - 0.982$

Missing 0.018 mole Ratio "other gases"

$P_{other\ gas} = X_{other\ gas} P_T$

$= 0.018(760)$

$P_{others} = 13.68\ mmHg$

Feb 1-8:13 AM

EC2

$2NH_{3(g)} + H_2SO_{4(aq)} \rightarrow (NH_4)_2SO_{4(s)}$

$\_\_\_\ \ell$

$15°C$

$1.15\ atm$

150 g

$\frac{150\ g\ (NH_4)_2SO_4}{} \left| \frac{1\ mole\ (NH_4)_2SO_4}{132\ g\ (NH_4)_2SO_4} \right| \frac{2\ mole\ NH_3}{1\ mole\ (NH_4)_2SO_4} = 2.273\ mole\ NH_3$

$PV = nRT$

$V = \frac{nRT}{P}$

$V = \frac{2.273(0.08206)(288)}{1.15\ atm} = 46.71\ \ell\ NH_{3(g)}$

Feb 1-8:16 AM

(18) C_3H_8 $\frac{2220\ KJ}{mole}$, 2.5 g, 20.55 → 28.25

$\Delta T = 7.7\ ^\circ C$

Find $\frac{KJ}{^\circ C}$

$$\frac{2220\ KJ}{1\ mole\ C_3H_8} \left| \frac{1\ mole\ C_3H_8}{7.7\ ^\circ C} \right| \frac{2.5\ g\ C_3H_8}{44\ g\ C_3H_8} = 16.4\ \frac{KJ}{^\circ C}$$

Feb 1-8:20 AM

Chap 14 Chemical Kinetics

Movement of a chem rxn.

Spring - S.U.
CHE 116 (3) Lec
CHE 117 (1) Lab

How fast a chemical rxn proceeds = RATE

Reactants → Products.

amt ↓ amt ↑

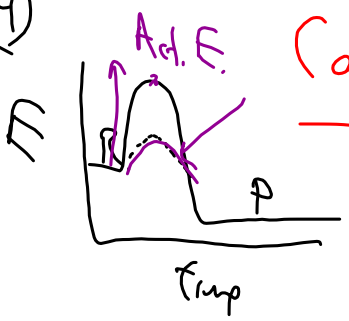
Molarity concentration

$\frac{\Delta[\ ]}{\Delta t}$ $\frac{dx}{dt}$

Feb 1-8:40 AM

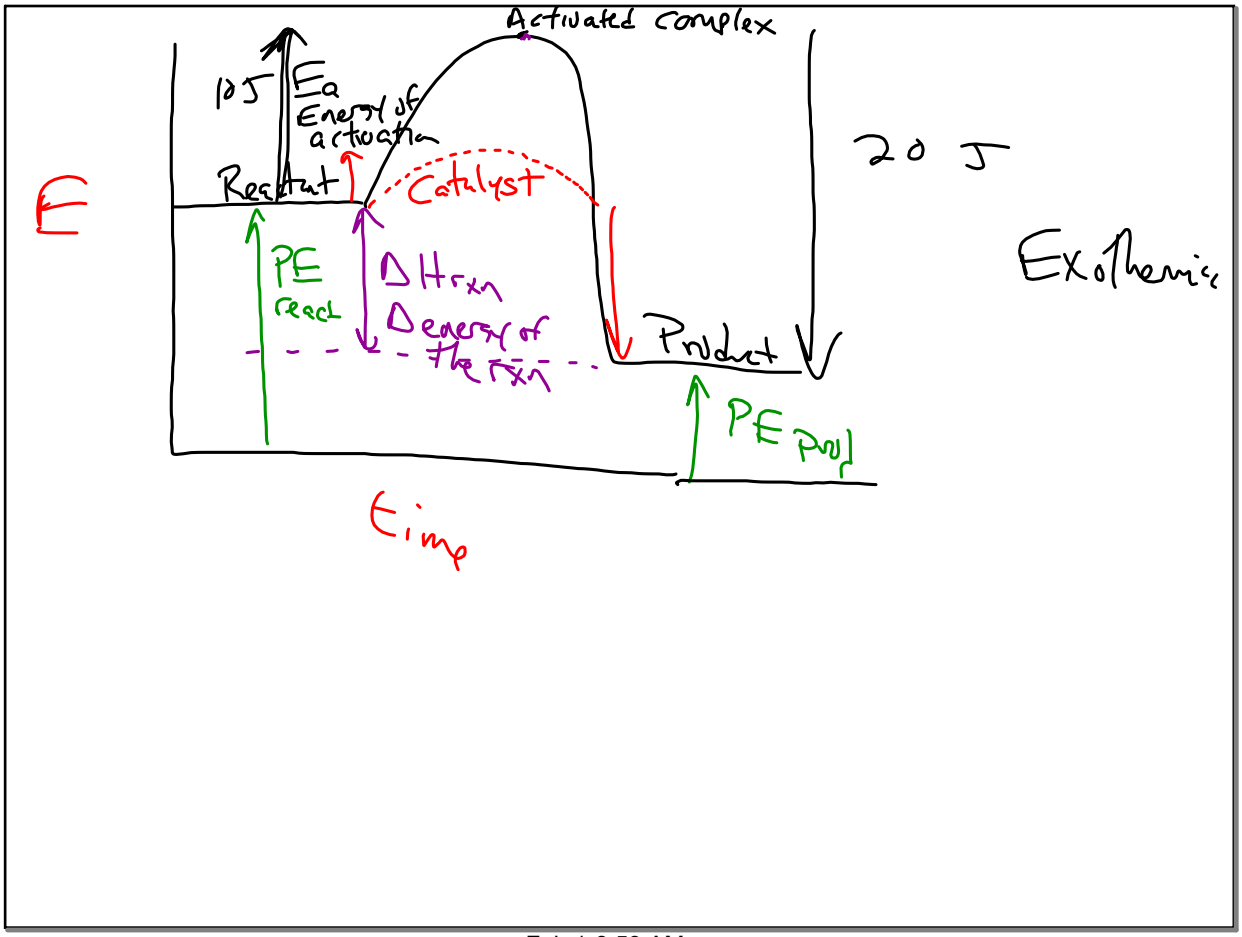
Factors That affect The rate of a reaction

1. Temp - avg KE molecules. (Shake Stir)
   as T↑, Rate ↑
2. Pressure of GASES
   P_{gas} ↑ = RATE ↑
3. Concentration of Reactants
   ↑ [ ], ↑ Rate b/c more collisions/sec
4. Catalyst



5. Surface Area
   ↑ SA, ↑ Rate

Feb 1-8:47 AM



Feb 1-8:53 AM

Reactants → Products.

$$\text{Avg Rate} = \frac{\Delta[\text{reactants}]}{\Delta t}$$

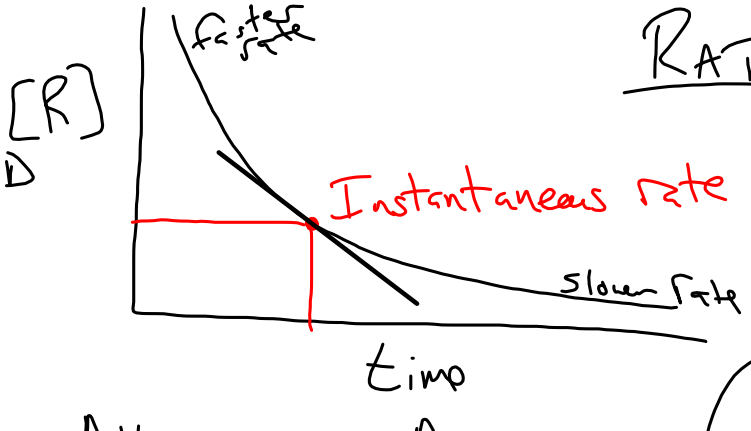
doing something

Reactants - overtime [R] ↓ Rate of disappearance

Products overtime [P] ↑ Rate of appearance

Feb 1-8:59 AM

RATE curve

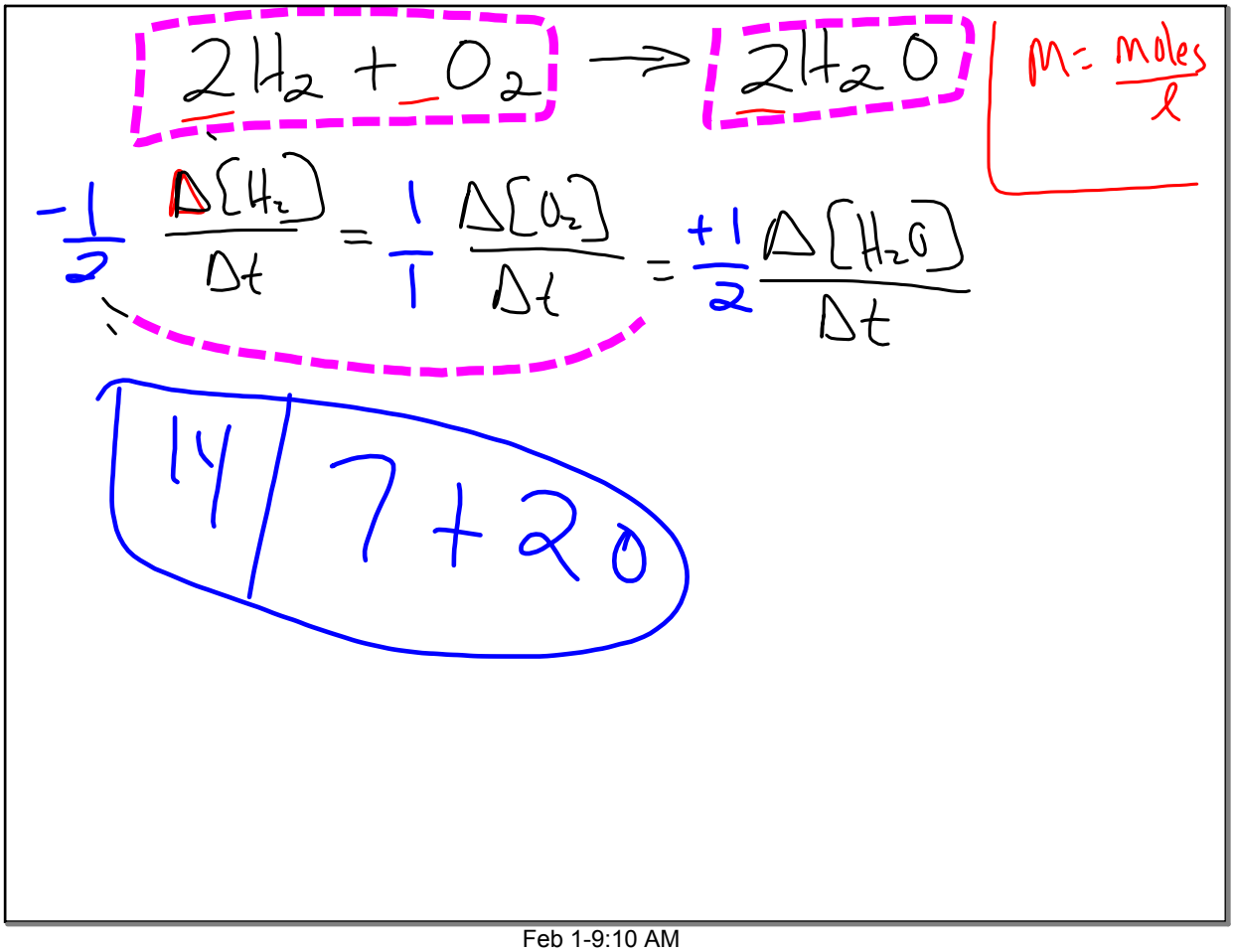


Instantaneous rate = tangent to curve at that point in time.

$\frac{\Delta y}{\Delta x}$ = slope

(⇒ lim derivative f'(x) at time = t)

Feb 1-9:05 AM



Feb 1-9:10 AM