

(5.55)  $C_6H_4O_2$

$2.2g$

$7.854 KJ$   
°C

$23.44 \rightarrow 30.57^\circ C$   
 $\Delta T = 7.13^\circ C$

$F_{ind} \text{ @ } \textcircled{a} \frac{KJ}{g C_6H_4O_2} \text{ @ } \textcircled{b} \frac{KJ}{mole C_6H_4O_2}$

$\textcircled{a} \frac{7.854 KJ}{7.13^\circ C}$	$106 g C_6H_4O_2$
$2.2 g C_6H_4O_2$	$1 \text{ mole } C_6H_4O_2$

$\textcircled{a} \frac{25.15 KJ}{g C_6H_4O_2}$

$2749.04 KJ$   
mole  $C_6H_4O_2$

Oct 19-7:37 AM

$\textcircled{13}$

C	$3837g/12$	$= 3.2/0.49 = 6.5$	13
H	$1.49g/1$	$= 1.49/0.49 = 3$	6
Cl	$52.28g/35$	$= 1.48/0.49 = 3$	6
O	$7.86g/16$	$= 0.49/0.49 = 1$	2

Moles

$C_{13}H_6Cl_6O_2$

Oct 19-8:01 AM

(14)  $2 \text{NaOH} + \text{Cl}_2 \Rightarrow \text{NaCl} + \text{NaClO} + \text{H}_2\text{O}$

LR  $1.23 \text{ mole}$   $1.47 \text{ mole}$   $1:1$   $\rightarrow$   $1.47 \text{ mole}$

$2:1$   $\rightarrow$   $0.615 \text{ mole}$

(15)

$8.5 \times 10^{22}$ <del>mole <math>\text{H}_2\text{O}</math></del>	<del>1 mole <math>\text{H}_2\text{O}</math></del>	18 g $\text{H}_2\text{O}$
	$6 \times 10^{23}$ <del>mole <math>\text{H}_2\text{O}</math></del>	<del>1 mole <math>\text{H}_2\text{O}</math></del>

Oct 19-8:05 AM

(16)  $\frac{\text{moles}}{2}$

M

50 g $\text{NaOH}$	1 mole $\text{NaOH}$
40 g $\text{NaOH}$	1 mole $\text{NaOH}$

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(17) moles Acid = moles Base

$n M l = n M l$

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

~~$\text{H}_2\text{C}_2\text{O}_4$~~

Acetic Acid  $\Rightarrow$  Acetate ion

$\text{H}^+$   $[\text{C}_2\text{H}_3\text{O}_2]^-$

OH<sup>-</sup>

Oct 19-8:10 AM

(18)  $\text{Na}_2\text{SO}_4$   
 250ml      0.1M      ? g

0.1 mole  $\text{Na}_2\text{SO}_4$   
 1 l

<del>0.1 mole <math>\text{Na}_2\text{SO}_4</math></del> 1 l	<del>0.250 l</del>	142.055 $\text{Na}_2\text{SO}_4$ 1 mole $\text{Na}_2\text{SO}_4$
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Oct 19-8:17 AM

(20) 0.126M  $\text{HClO}_4$  →  $\frac{0.126 \text{ mole } \text{HClO}_4}{1 \text{ l}}$   
 — ml, 0.102 mole

1000ml	<del>0.102 mole <math>\text{HClO}_4</math></del>
<del>0.126 mole <math>\text{HClO}_4</math></del>	=

(Ecl)  $\text{NaBr} \rightarrow \text{Na}^+ + \text{Br}^-$

1 l	<del>1 mole <math>\text{NaBr}</math></del>	<del><math>2 \times 10^{-4}</math> mole <math>\text{Br}^-</math></del>
<del>0.025 mole <math>\text{NaBr}</math></del>	<del>1 mole <math>\text{Br}^-</math></del>	0.008 g $\text{Br}$

Oct 19-8:20 AM

②  $N_2 + 3H_2 \rightarrow 2NH_3$   
 0.6g 0.0574g in Lab

0.6g $H_2$	1mole $H_2$	<del>2mole <math>NH_3</math></del>	17g $NH_3$	= 3.4g $NH_3$
	<del>2g <math>H_2</math></del>	<del>3mole <math>H_2</math></del>	1mole $NH_3$	

o yield =  $\frac{0.0574g}{3.4g} \times 100 = 1.69\%$  yield

Oct 19-8:35 AM

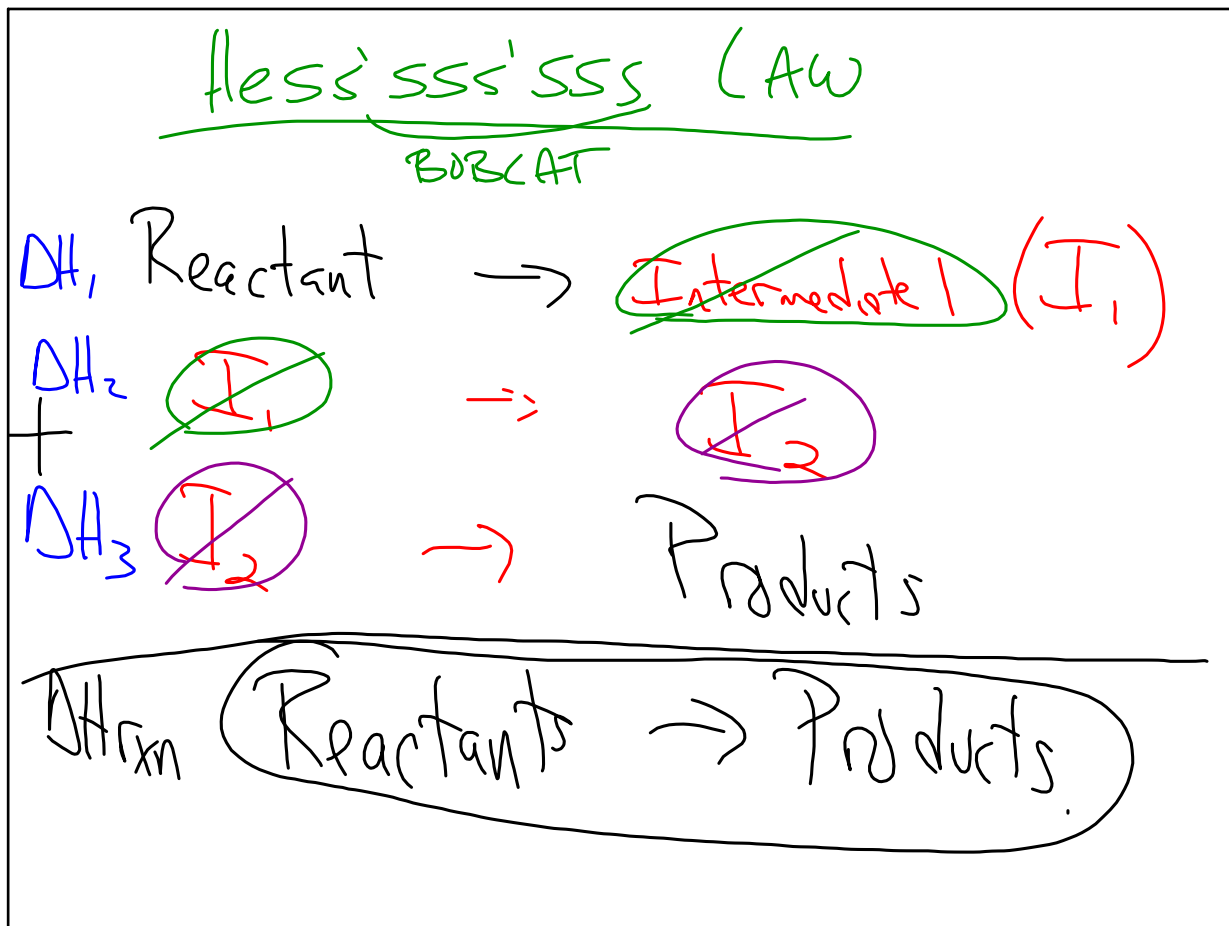
②  $C_6SO_4 + KCl \rightarrow CuCl_2 + K_2SO_4$

ECZ Q13

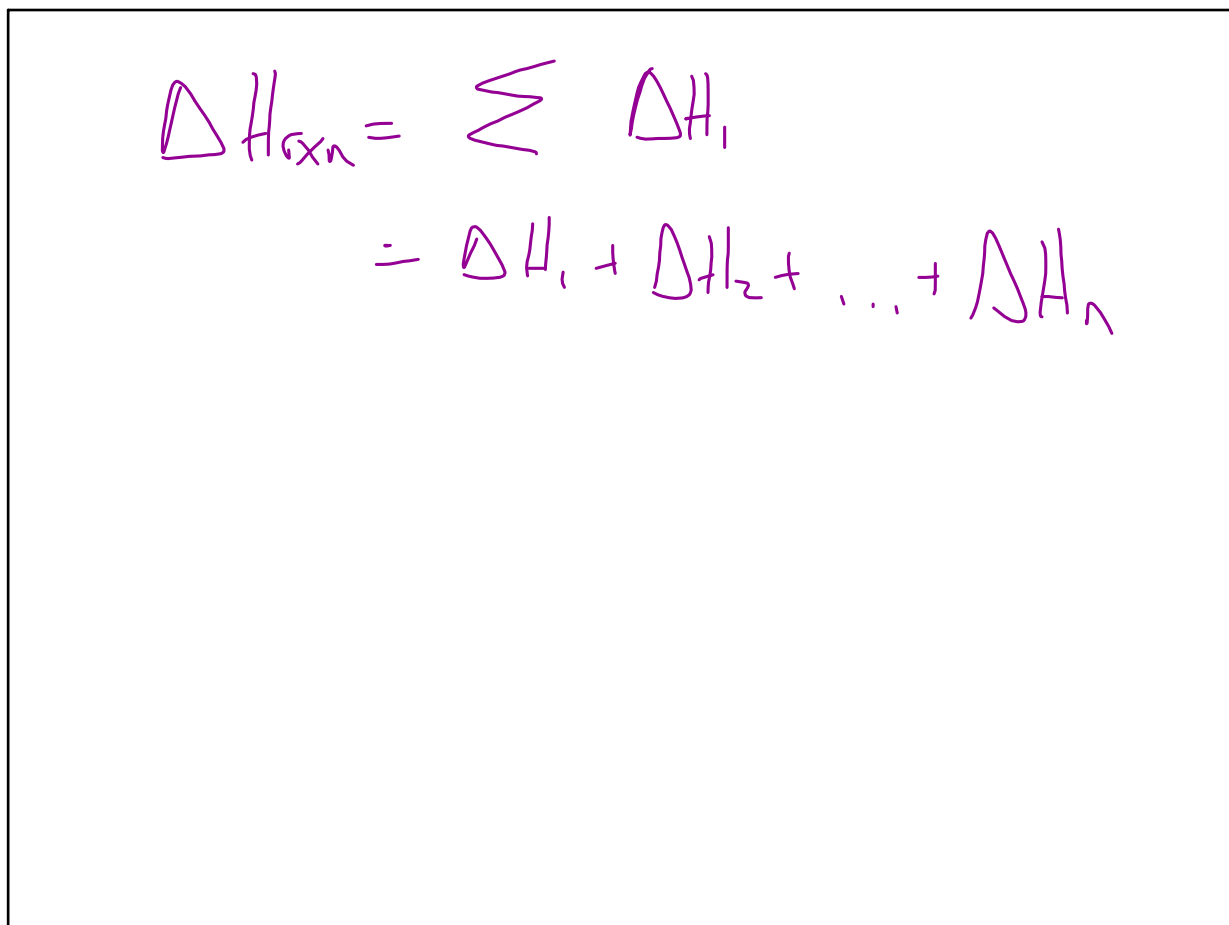
79.88g C	1mole C	= $\frac{6.66mole C}{6.66} = 1$	(Cl <sub>2</sub> )
	12g C		

2012g H	1mole H	= $\frac{2012mole H}{6.66} = 3$
	1g H	

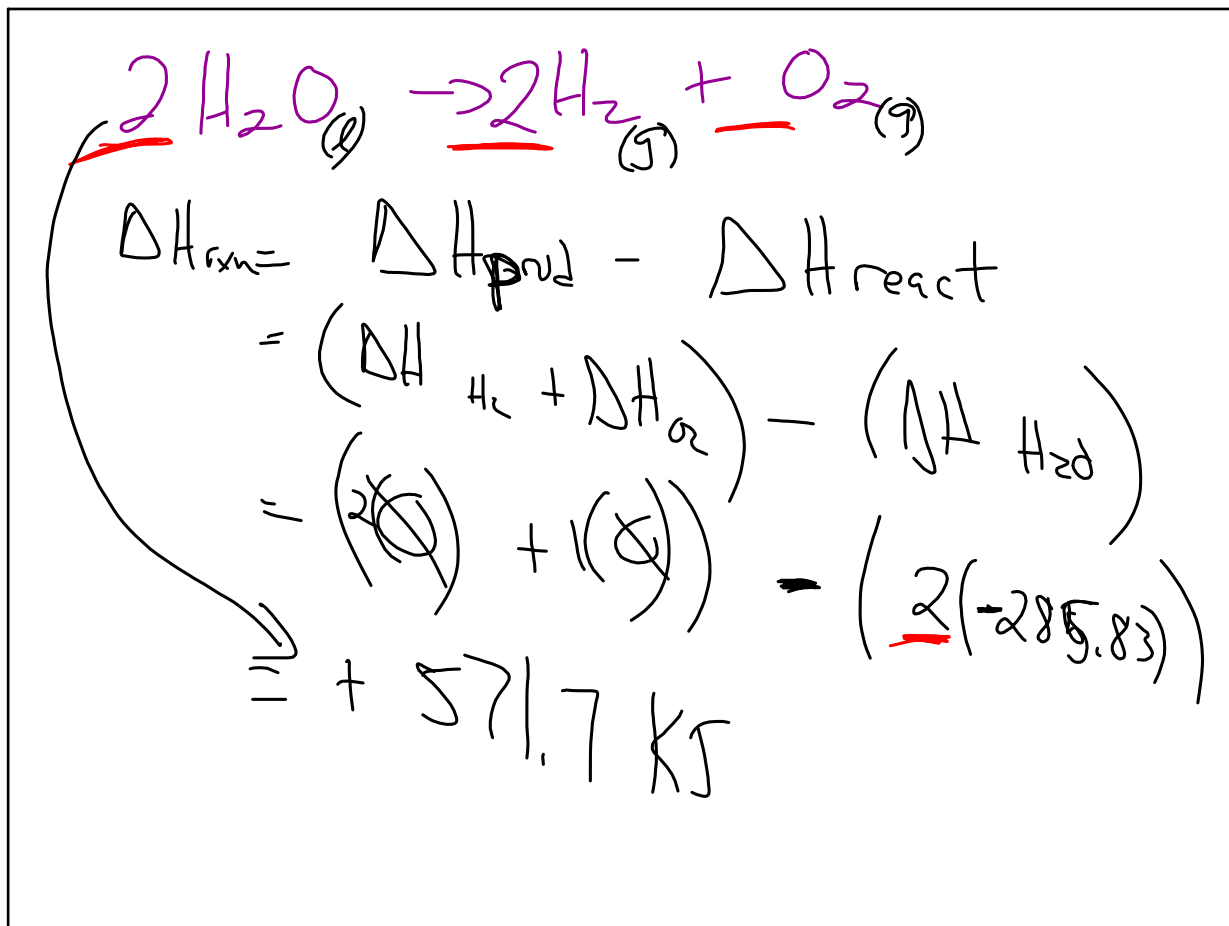
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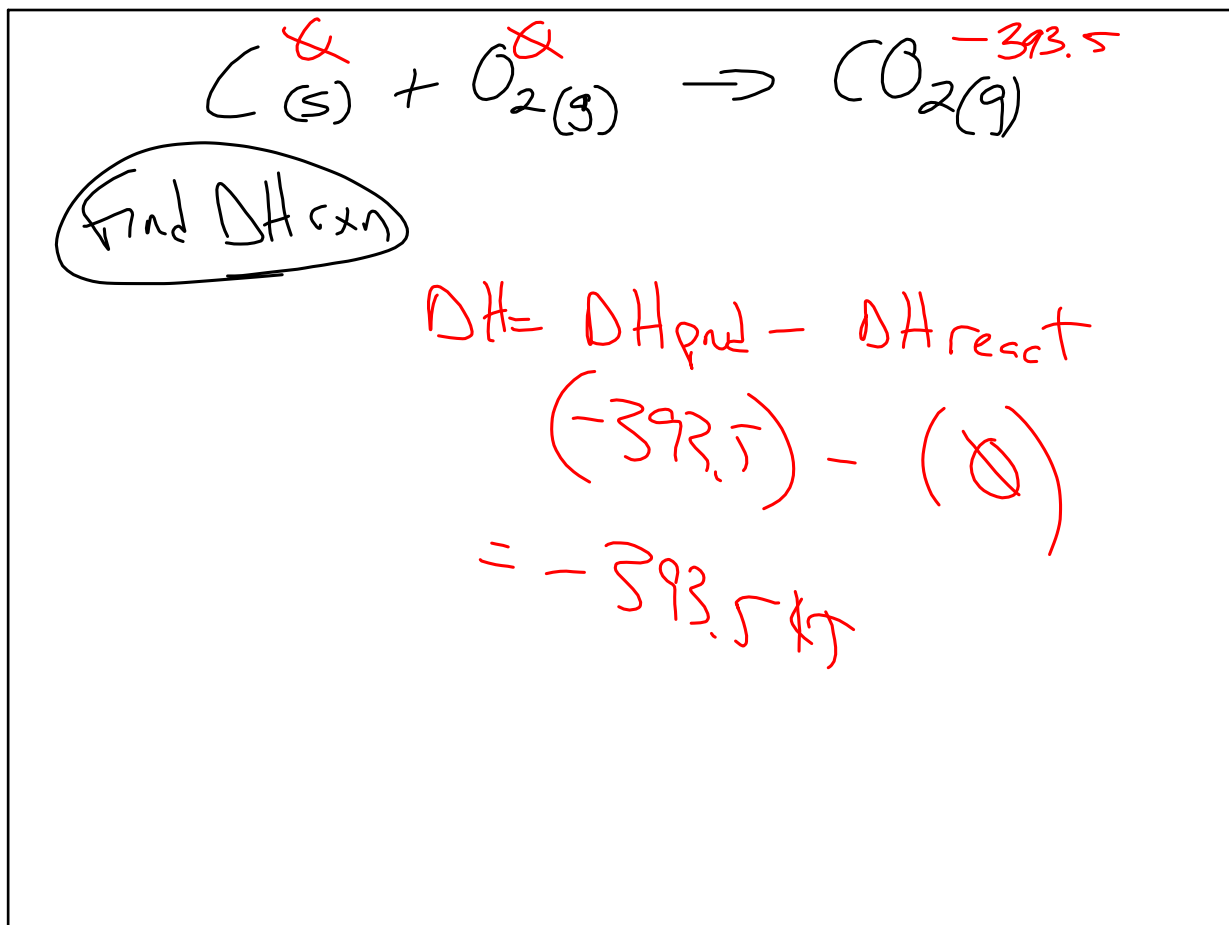
Oct 19-8:47 AM



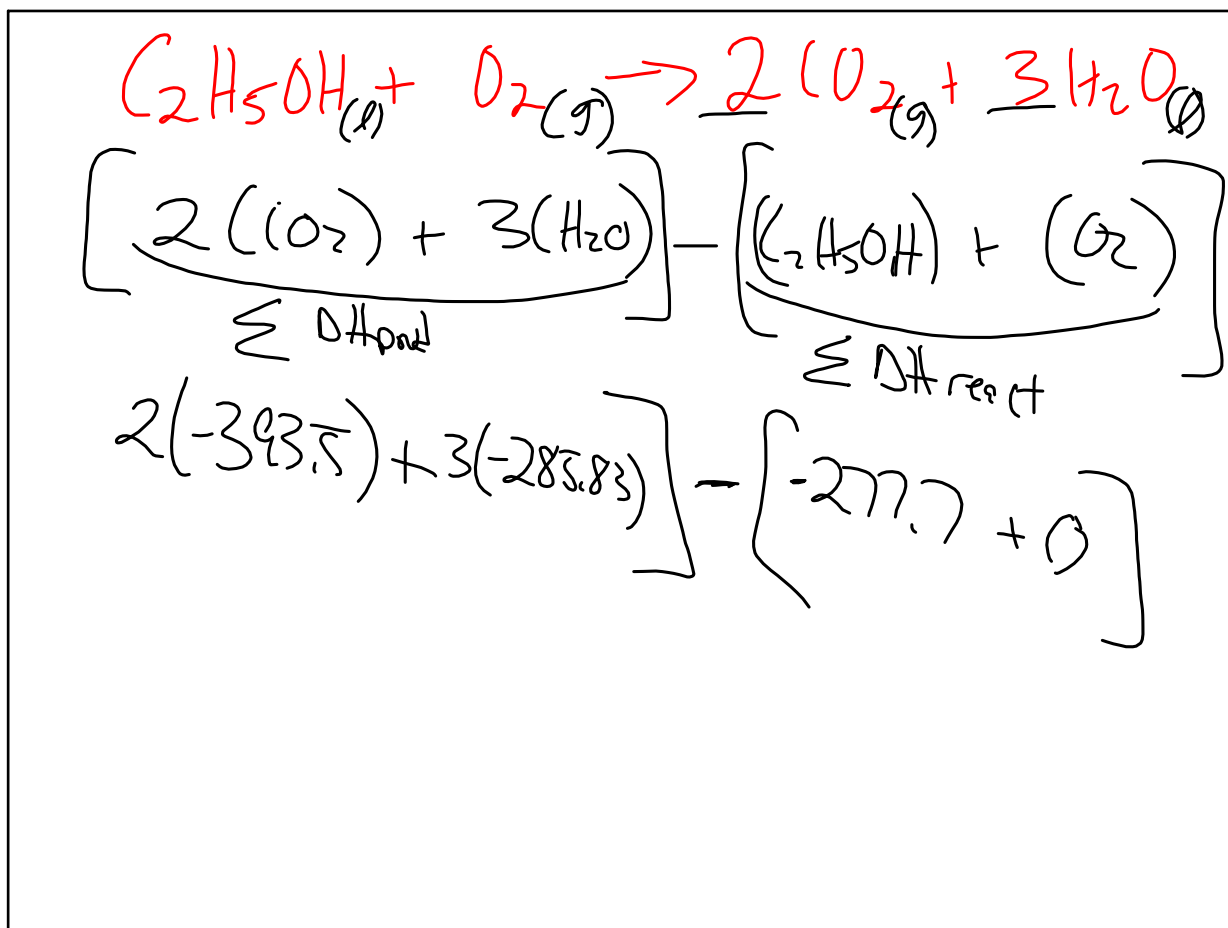
Oct 19-8:54 AM



Oct 19-9:03 AM



Oct 19-9:09 AM



Oct 19-9:13 AM

5.72

Oct 19-9:17 AM