

(17) $0.691(62.9) + 0.309(x) = \underline{63.5}$

$x = 64.84$

(18) Find

$\frac{J}{g \cdot K}$	$\frac{92.1 J}{Mole \cdot K}$	$\frac{118 J}{Mole}$ Given
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$$\frac{92.1 J}{Mole \cdot K} \bigg/ \frac{118 J}{Mole} = 0.7805$$

Jan 26-7:29 AM

(20) $\overset{+1}{H}\overset{-1}{Cl} + Na\overset{+1}{O}\overset{-1}{OH} \rightarrow Na\overset{+1}{O}\overset{-1}{Cl} + H\overset{+1}{O}\overset{-1}{OH}$

DR \Rightarrow No REDOX!

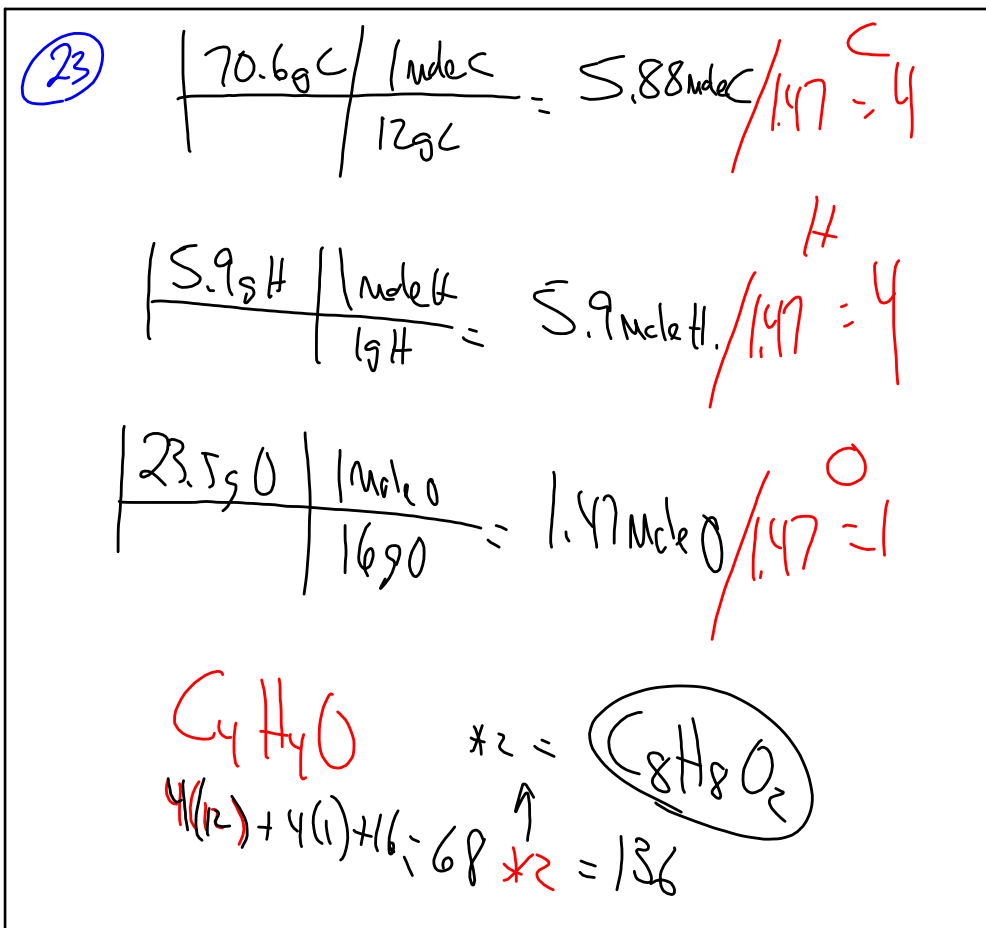
(9) $Cu^0 + 2AgNO_3^{+1 -1} \rightarrow 2Ag^0 + Cu(NO_3)_2^{+2 -1}$

LEO: $Cu^0 \rightarrow Cu^{+2} + 2e^-$ (Red Agent)

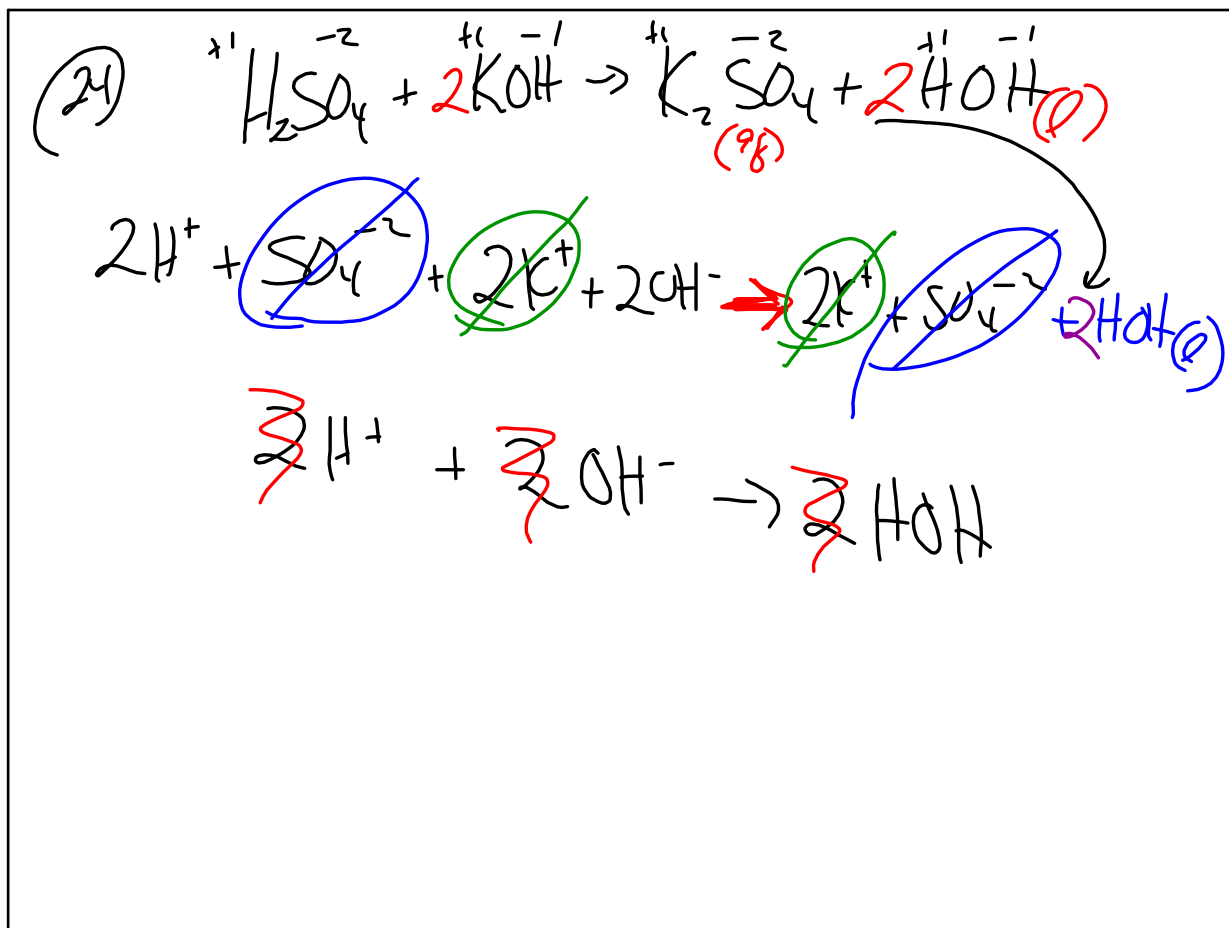
GER: $2Ag^{+1} + 2e^- \rightarrow 2Ag^0$ (Ox agent)

NO_3^- Spectator (no change)

Jan 26-8:17 AM



Jan 26-8:26 AM



Jan 26-8:30 AM

(25)

21.4 g	1 kg	$(100)^3 \text{ cm}^3$	$= 21400 \text{ kg/m}^3$ 2.14×10^4
cm^3	1000 g	$(1)^3 \text{ m}^3$	

$\frac{\text{kg}}{\text{m}^3}$

Jan 26-8:33 AM

(26)

$$\overset{-941}{\text{IF}_7} + \overset{0}{\text{I}_2} \rightarrow \overset{-840}{\text{IF}_5} + 2 \overset{2(-95)}{\text{IF}}$$

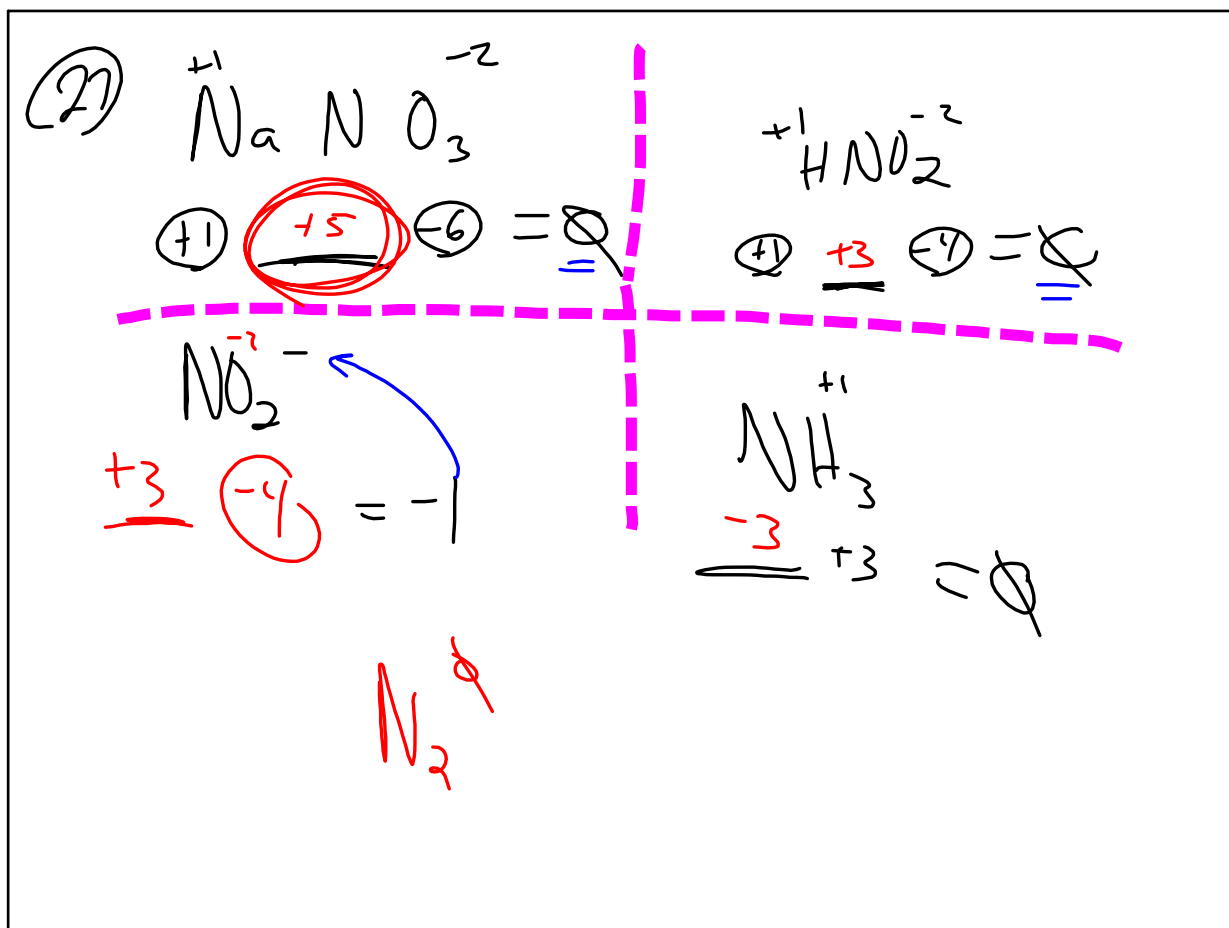
element in elementary form = 0

$$\Delta H_{\text{rxn}} = n \sum \Delta H_{\text{prod}} - n \sum \Delta H_{\text{react}}$$

$$= [(-840) + 2(-95)] - [-941 + 0]$$

-89 kJ/mole

Jan 26-8:36 AM



Jan 26-8:39 AM

(28) Sig Figs

0.003060⁽⁴⁾

—————→

Jan 26-8:42 AM

(29)
$$M = \frac{\text{moles solute}}{\text{l soln.}}$$

9.3g NaCl	1 mole NaCl	= 0.458M
0.350 l	58.5 NaCl	

Jan 26-8:44 AM

(3) START 20 l CO₂, 23°C, 1 atm = moles?

END 20 l 23°C 0.5 atm = moles?

START

$$PV = nRT$$

$$n = \frac{PV}{RT} = \frac{1(20)}{(0.08206)(296)}$$

0.823 mole start

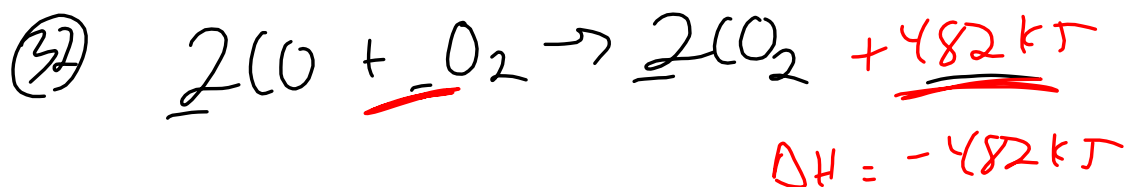
END

$$n = \frac{PV}{RT} = \frac{(0.5)(20)}{(0.08206)(296)}$$

0.412
97%

0.823 moles start
0.412 end
* 0.411 left over

Jan 26-8:46 AM



89.5 g O₂	1 mole O ₂	482 kJ	= 1348.1 kJ
	32 g O₂	1 mole O ₂	

$1.3481 \times 10^3 \text{ kJ}$

Jan 26-8:55 AM

(33) $V_1 = 900 \text{ ml}$ $P_1 = 100 \text{ mmHg}$ $T_1 = 1$

 $V_2 = 300 \text{ ml}$ $P_2 = ?$ $T_2 = 2$

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

$$\frac{100(900)}{1} = \frac{P_2(300)}{2}$$

$$P_2 = 600 \text{ mmHg}$$

Jan 26-8:58 AM



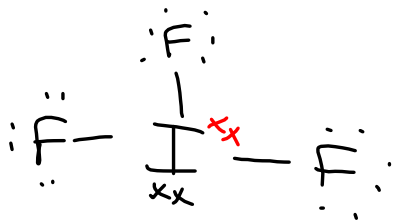
lose 2e⁻
outermost PEC

Jan 26-9:06 AM

④①



7 + 3(7) = 28 - 6 = 22



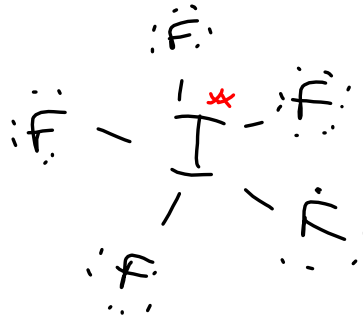
$$\begin{array}{r} -18 \\ 4 \\ -2 \\ 2 \\ \hline 2 \end{array}$$

3b
2ab T-shaped

$$sp^3 d' = 5$$



7 + 5(7) = 42 - 10 = 32



$$\frac{32}{2}$$

5b
1ab Square pyramidal

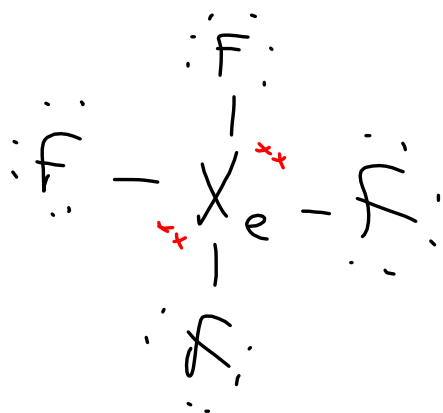
$$sp^3 d^2 = 6$$

Jan 26-9:10 AM

(4/2)



$$8 + 4(7) = 36 - 8 = 28 - 24 = 4$$



4b
2ab
SQ. planar
 $sp^3d^2 = 6$

Jan 26-9:14 AM

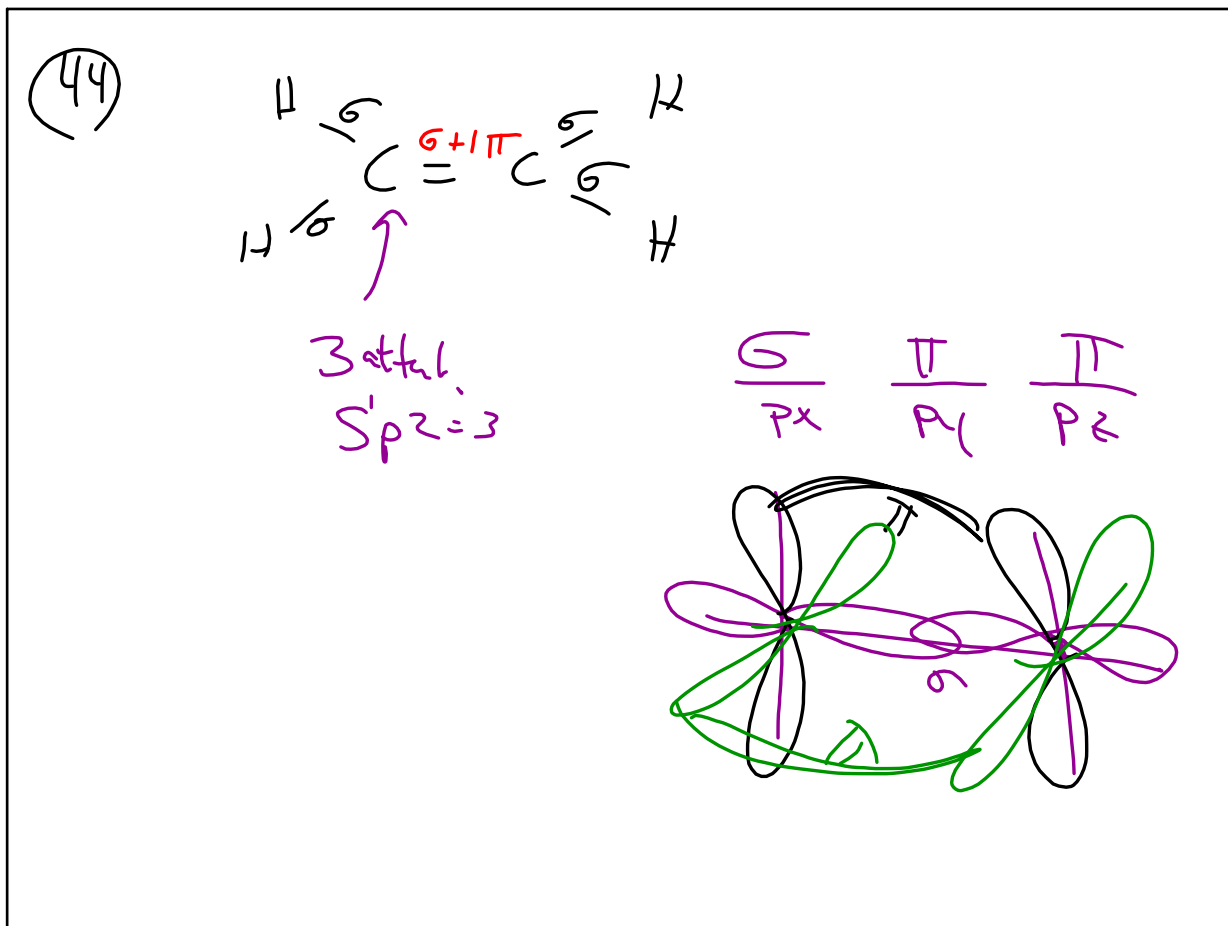
(4/3)

$$PV = nRT$$

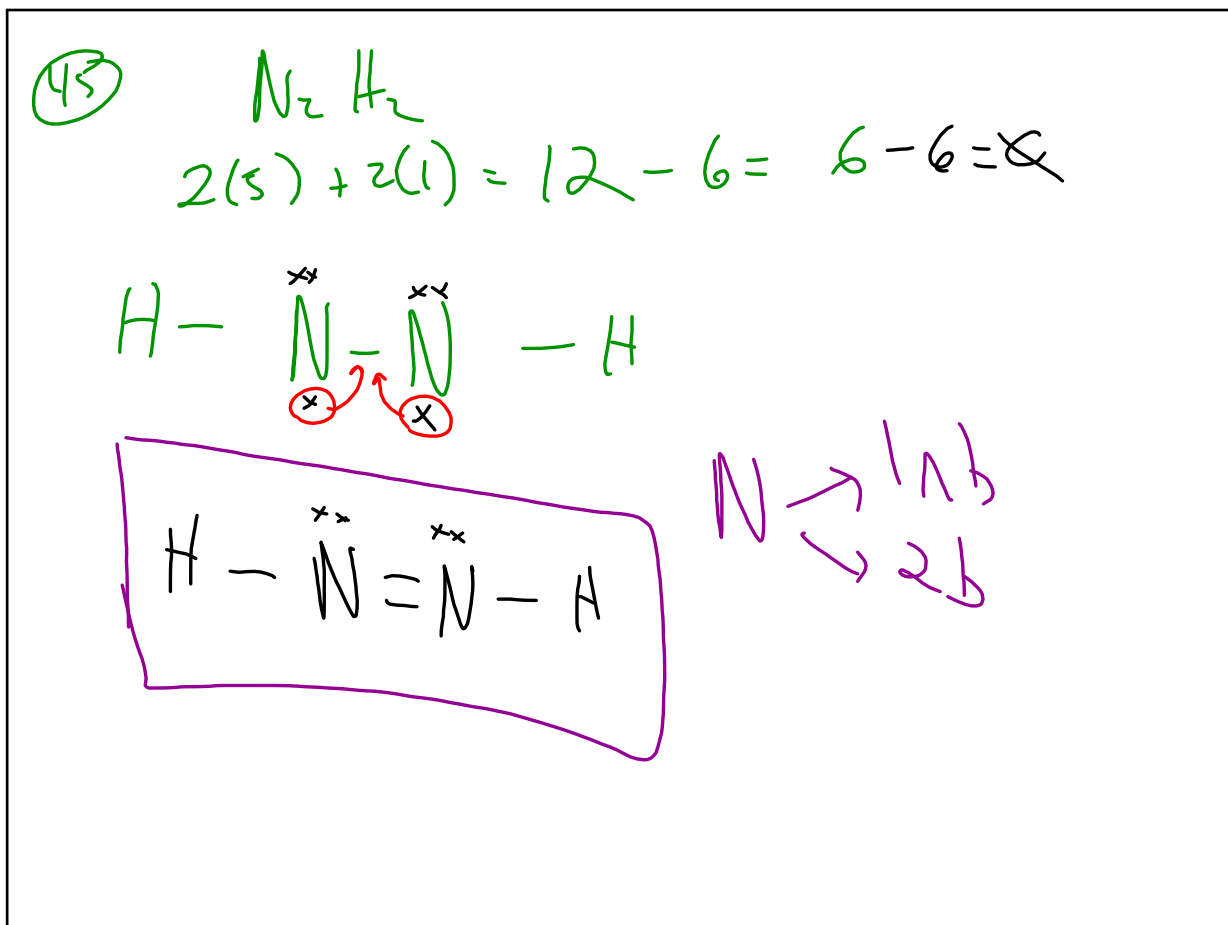
$$P = \frac{\frac{g/M}{n} RT}{V} = \frac{\left(\frac{6.022g}{16}\right) (0.08206) (402)}{30}$$

$$P = 0.414 \text{ atm}$$

Jan 26-9:15 AM



Jan 26-9:17 AM



Jan 26-9:18 AM