

③ $\text{CH}_4 + 3\text{Cl}_2 \rightarrow \text{CHCl}_3 + 3\text{HCl} + 336\text{KJ}$

23g HCl	1 mole HCl	336 KJ	23g	KJ
	36g HCl	3 moles HCl	=	10.575 KJ

$\uparrow \rightarrow$ Mole Mole RATIO

Nov 10-7:37 AM

④ $\frac{15.57 \text{ KJ}}{\uparrow \text{ glucose}}$, 2.5g glucose

$\Delta T = 20.55 \rightarrow 23.25$
 $\rightarrow 2.7^\circ\text{C}$

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

15.57 KJ	2.5g glucose	2.7
g glucose		g glucose

$Q = mc\Delta T$
 $c = \frac{Q}{m\Delta T}$

Nov 10-7:52 AM

⑥ $E = R_H \left(\frac{1}{n_i^2} - \frac{1}{n_f^2} \right)$

$E = R_H \left(\frac{1}{2^2} - \frac{1}{1^2} \right)$

$E = R_H \left(\frac{1}{4} - \frac{1}{1} \right)$

$E = -\frac{3}{4} R_H$

$E = h\nu$

$h\nu = -\frac{3}{4} R_H$

$\nu = \frac{hc}{\lambda}$

$-\frac{3R_H}{4} = \frac{hc}{\lambda}$

$\lambda = \frac{4hc}{3R_H}$

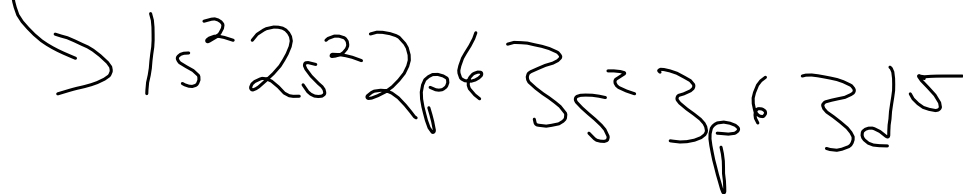
Nov 10-7:59 AM

Principal	n	size	$1, 2, 3, \dots$
subshell	l	shape	$0, 1, 2, 3, \dots$ MAX($n-1$)
orbital	m	orientation, uspec	$-l$ to $+l$
	s	Spin	

Nov 10-8:04 AM



Nov 10-8:09 AM



Nov 10-8:22 AM

15.3g NaNO_3 , ~~3.44%~~ , ~~$\frac{1070\text{J}}{0\text{L}}$~~
1 mole NaNO_3 ($\frac{\text{mole}}{85\text{g}}$) Find ΔH KJ / (mole NaNO_3)

1.070KJ	3.44%	85g NaNO_3	1mole NaNO_3
15.3g NaNO_3			

Nov 10-8:23 AM

heat gained = heat lost

Room Temp
H₂O
20°C

$mC\Delta T = mC\Delta T$
 $mC(\underline{T_f - 20}) = mC(\underline{100 - T_f})$

hot metal
100°C

Nov 10-8:26 AM