

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

$\lambda = \text{meters!}$

$c = \frac{m}{sec}$

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

$h = 6.63 \times 10^{-34} \text{ J} \cdot \text{sec}$   
 $R_H = 2.18 \times 10^{-18} \text{ J}$

Oct 29-7:20 AM

$E = mc^2$   
 $E = hf$   
 $c = f \lambda$

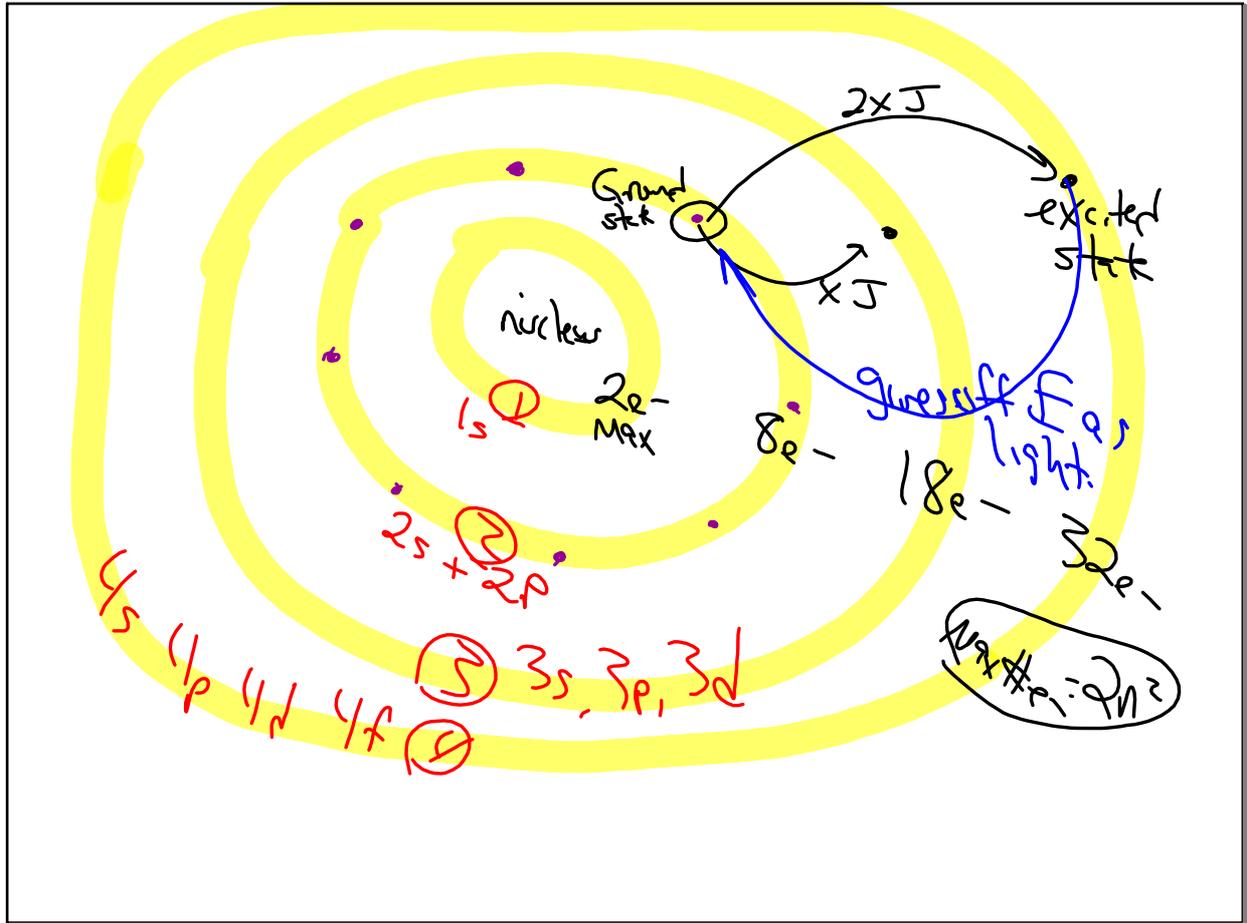
$\frac{1}{\lambda} = \frac{h}{mv}$       light  $\rightarrow$  mass

mass = kg

$\frac{J = \text{kg} \cdot \text{m}^2}{\text{sec}^2}$

QUANTA

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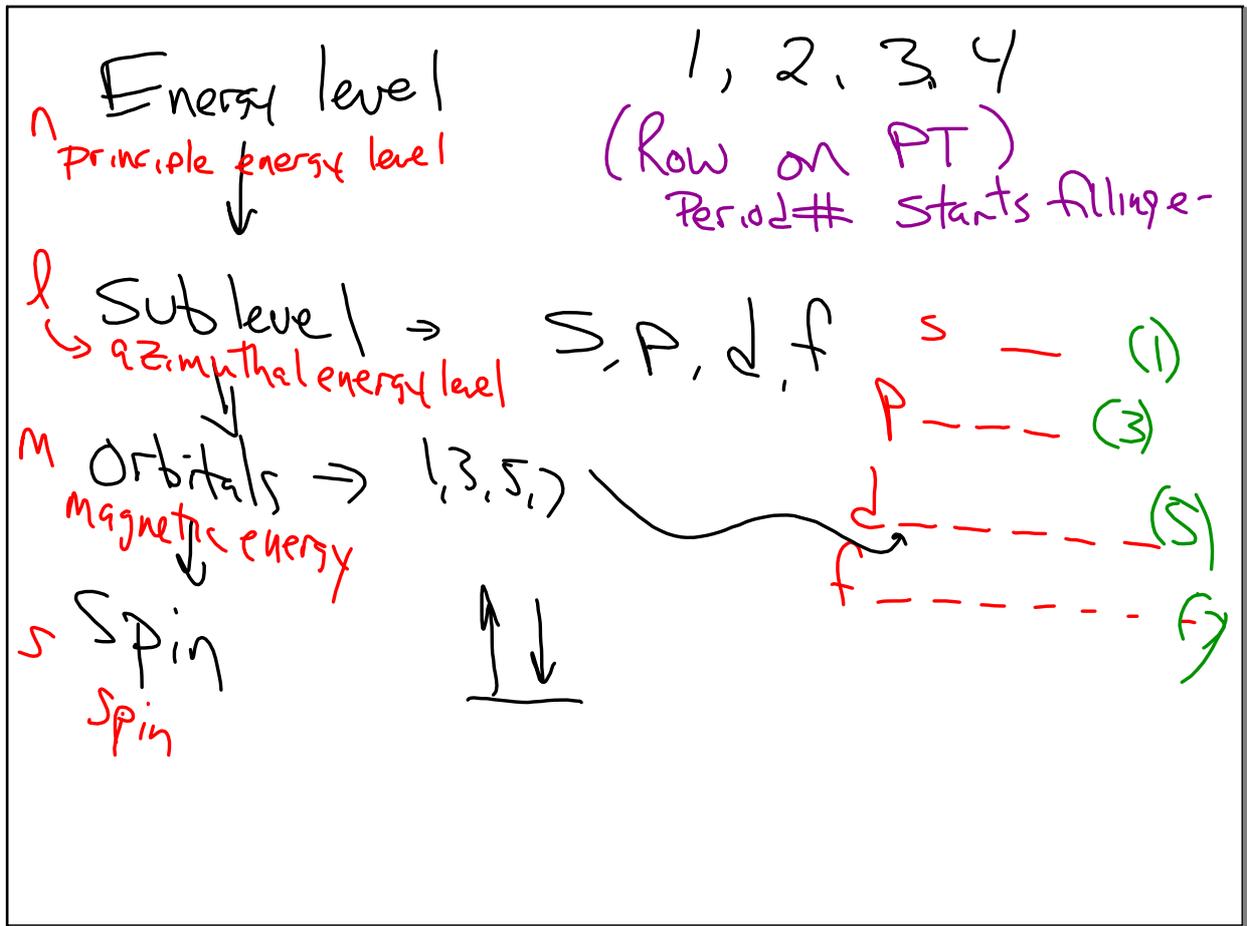
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$$\text{Nucleus} = p + n$$

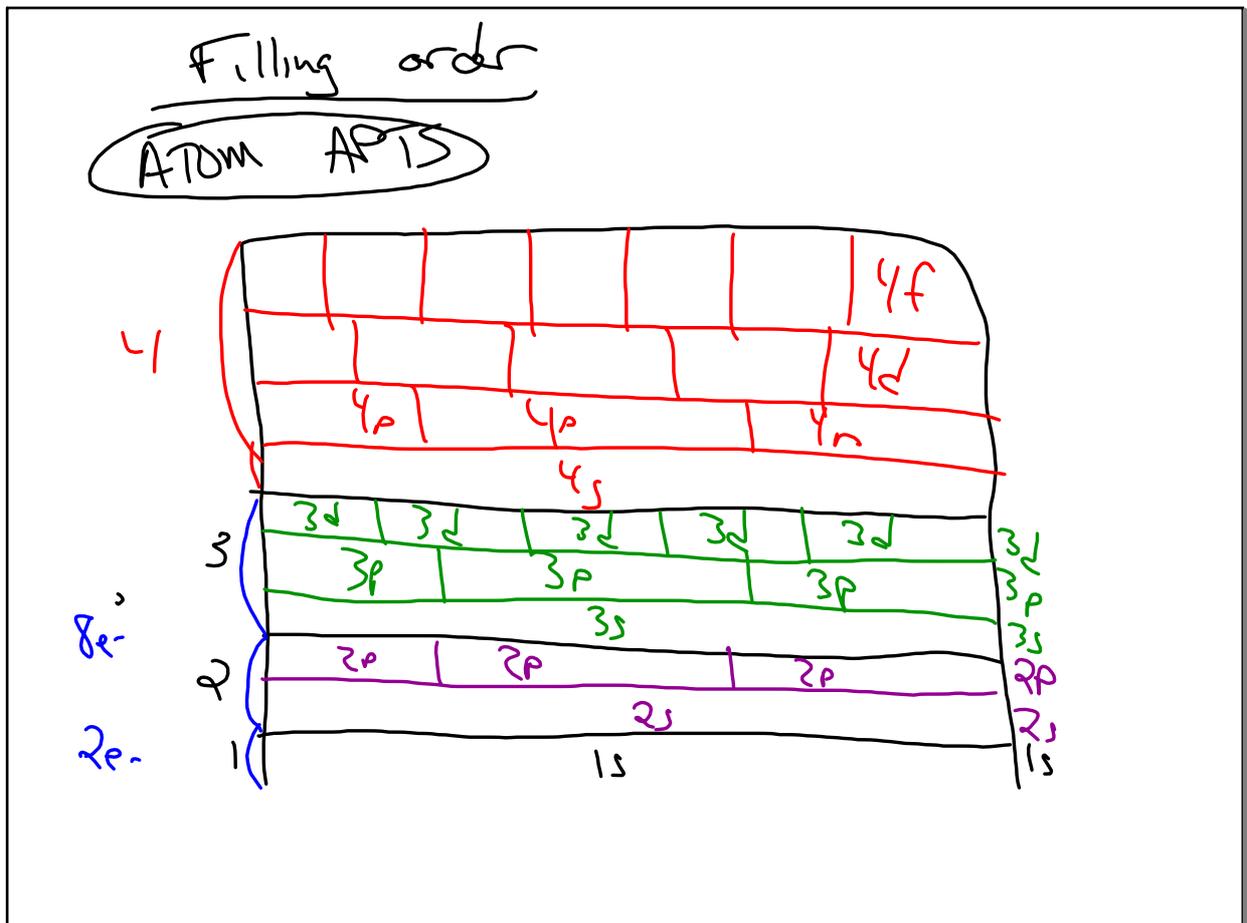
$$\begin{matrix} \uparrow & \oplus & \ominus \\ \text{POSITIVE} & 1 \text{amu} & 1 + \text{amu} \\ \text{CHG} & & \end{matrix}$$

← attract  $\ominus$  electrons  $e^-$

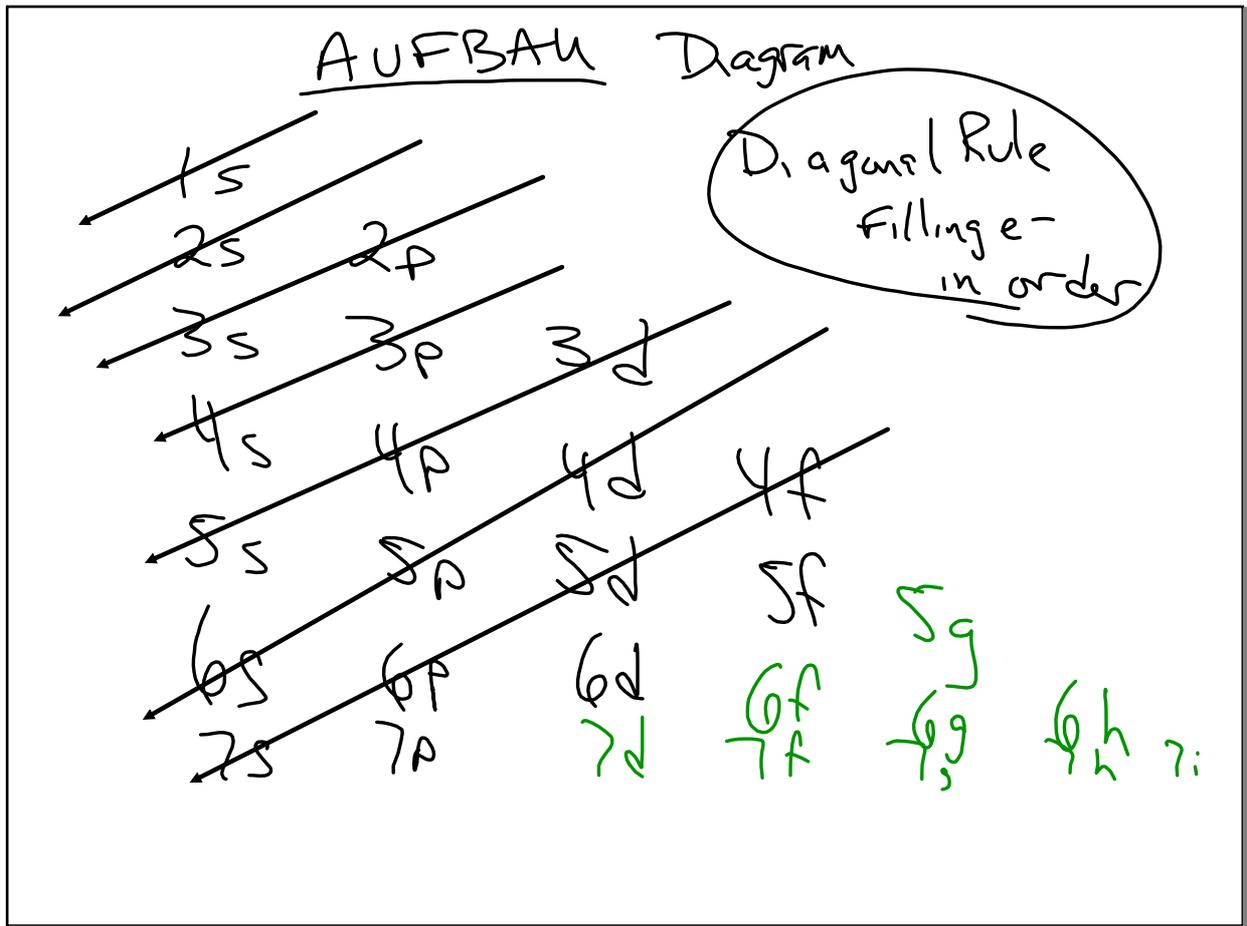
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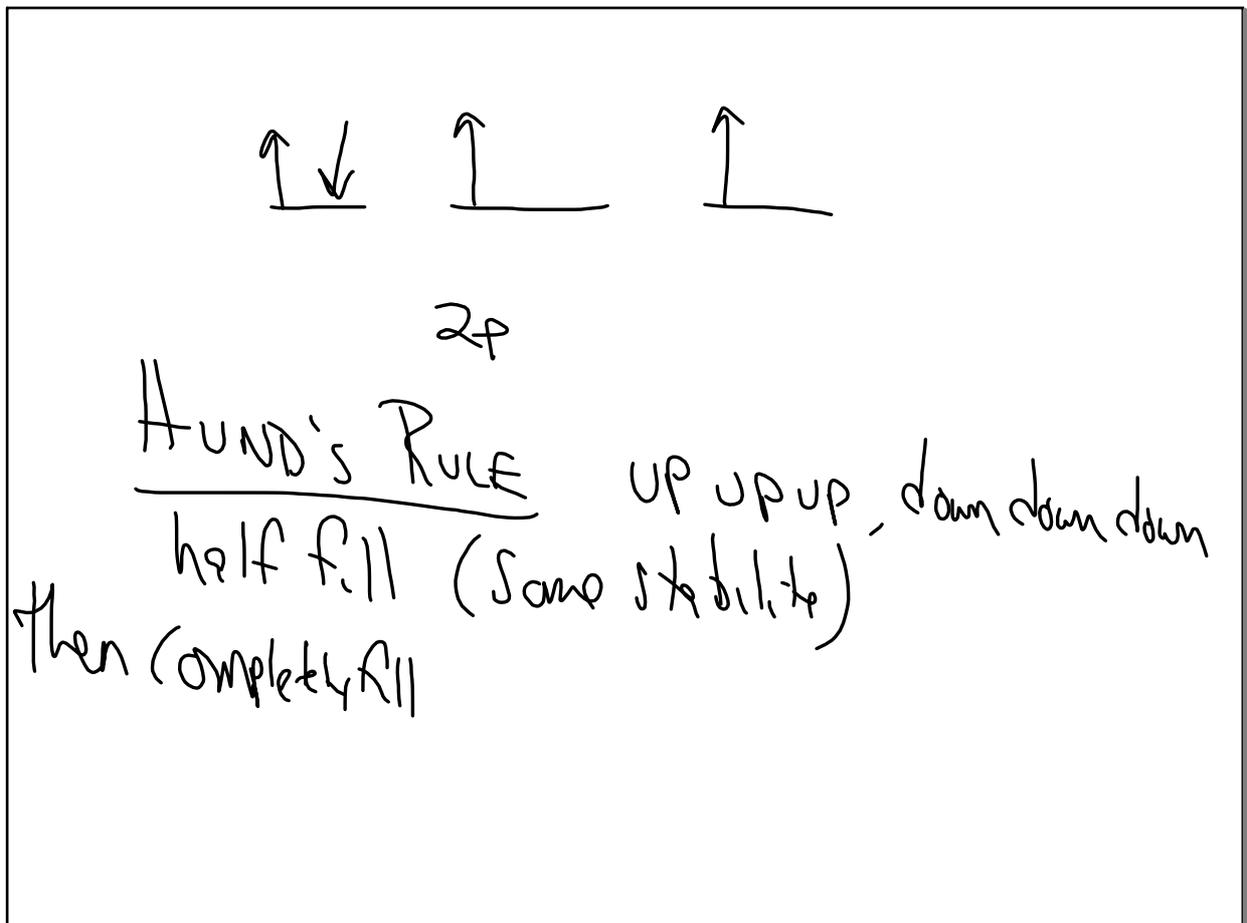
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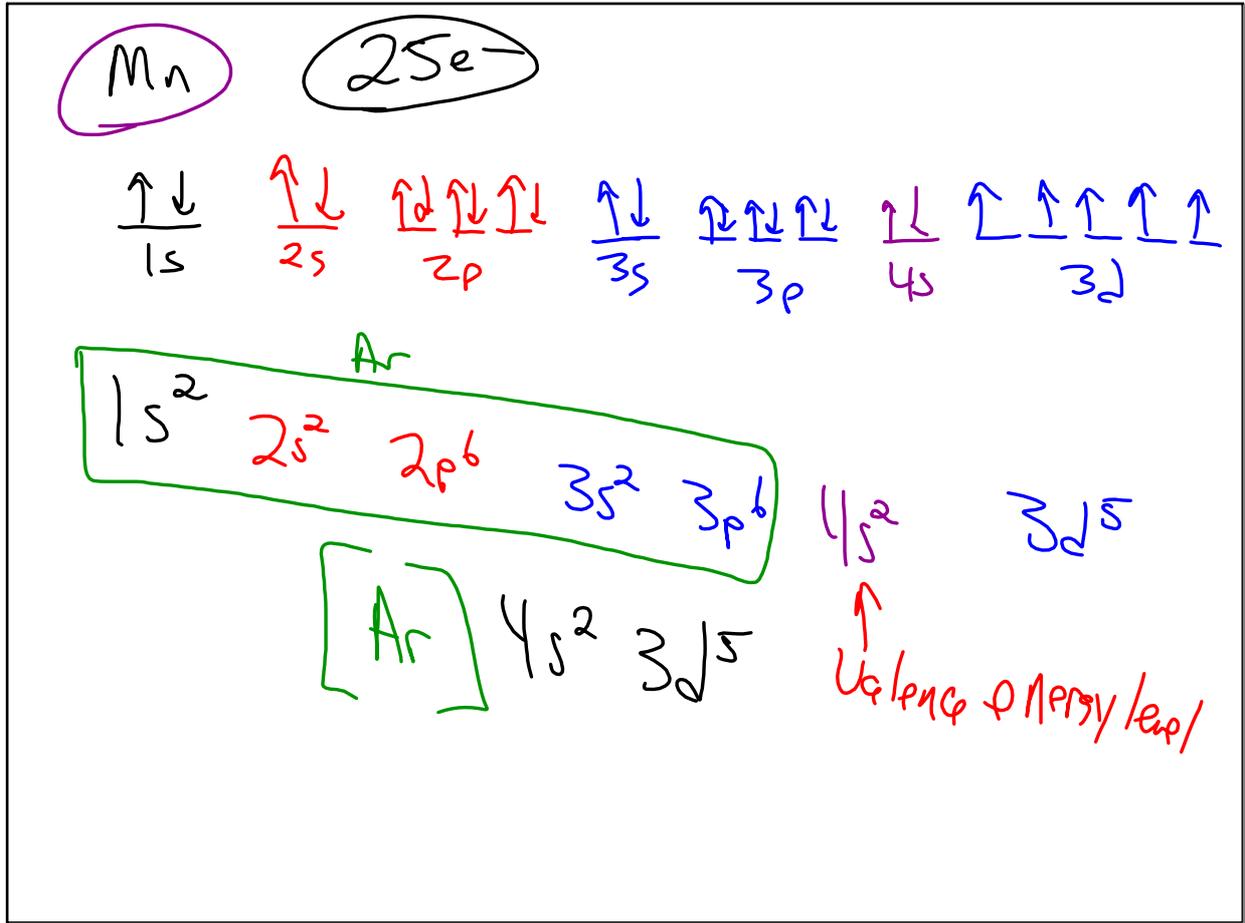
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Oct 29-8:17 AM



Oct 29-8:26 AM



Ionization Energy (IE)

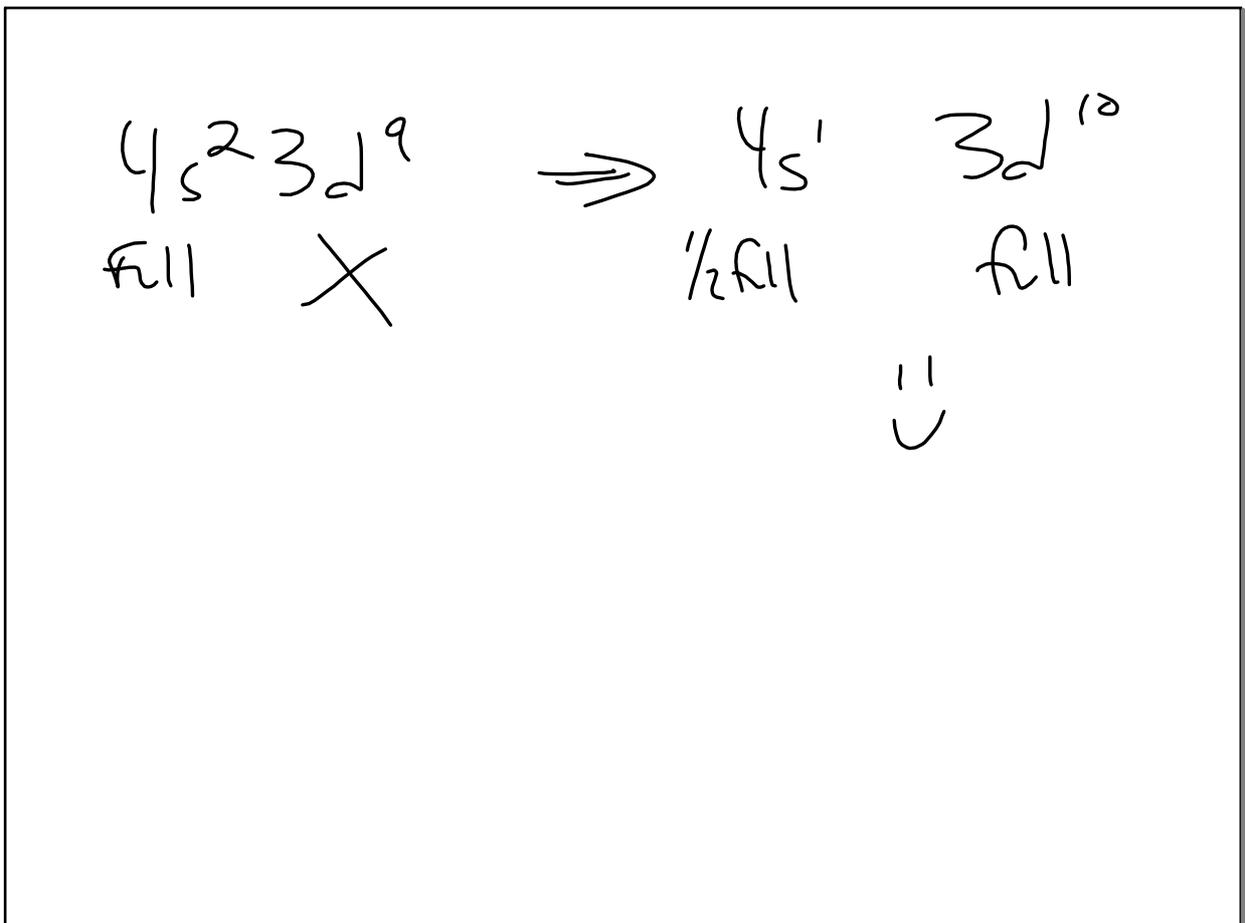
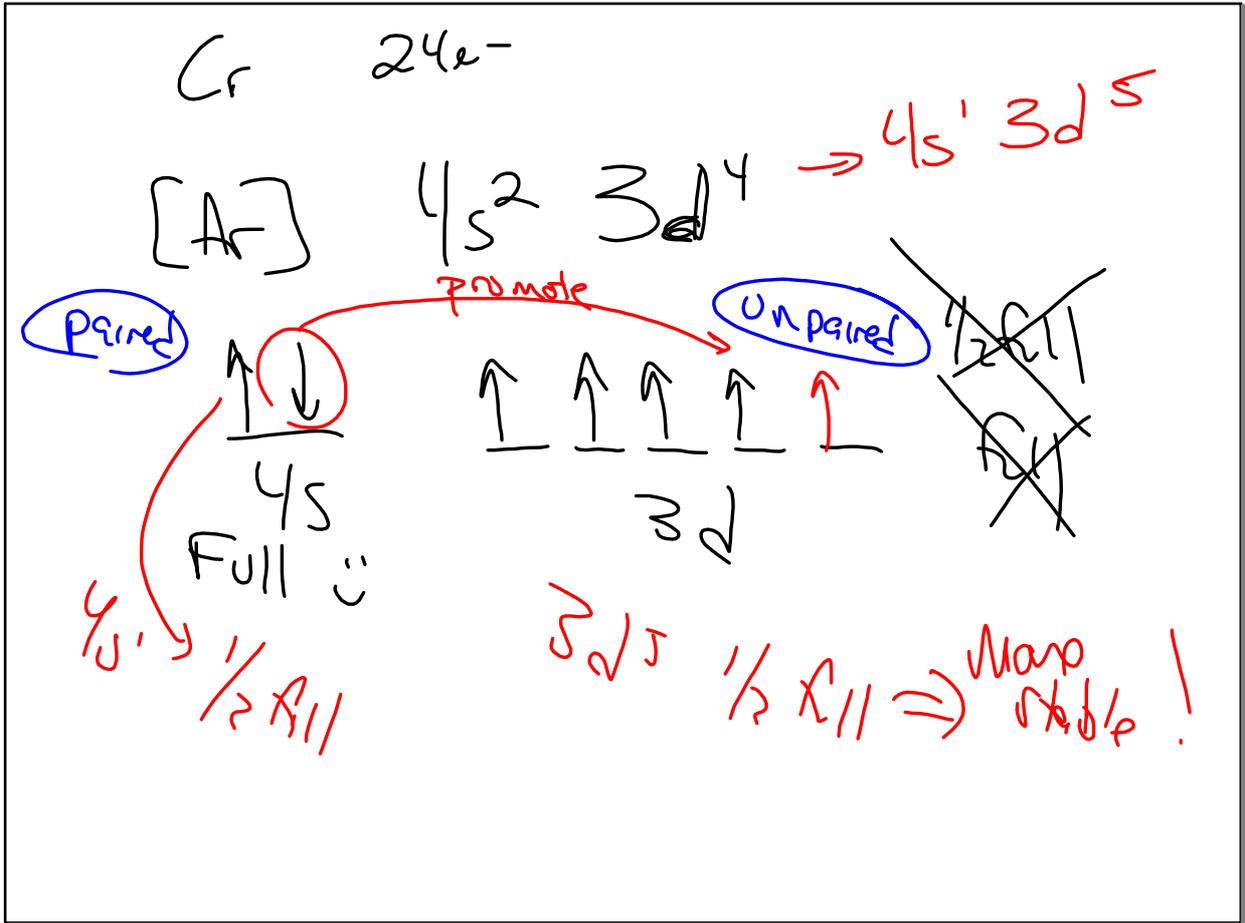
energy required to remove

Outermost Valence electron.

\* Principle energy level

Most loosely held.

Oct 29-8:35 AM



6 / 66 + 68 a, b, c

Oct 29-8:45 AM