Name: **Date:**   **Period:**   **Seat #:**

Formulas and Constants					
$c = \lambda \upsilon$	$E = h\upsilon$	$E = \dfrac{hc}{\lambda}$	$E_n = -\dfrac{Rhc}{n^2}$	$\lambda = \dfrac{h}{mv}$	$\dfrac{1}{\lambda} = R\left(\dfrac{1}{2^2} - \dfrac{1}{n^2}\right)$
$c = 2.998 \times 10^8$ m/s $h = 6.626 \times 10^{-34}$ J·s $Rhc = 2.18 \times 10^{-18}$ J $R = 1.0974 \times 10^7$ m^{-1}					

☐ Calculate the energy of level n=3 of the hydrogen atom.

☐ Calculate the energy and wavelength of light emitted when an electron drops from level n=5 to n=2. What color will this light be? _____

☐ A runner with a mass of 50.0 kg moves at a velocity of 2.00 m/s. Calculate her deBroglie wavelength as she moves?