

Table 4-1 The Hydrogen Series

Names	Wavelength Ranges	Formulas
Lyman	Ultraviolet	$\kappa = R_{\text{H}} \left(\frac{1}{1^2} - \frac{1}{n^2} \right) \quad n = 2, 3, 4, \dots$
Balmer	Near ultraviolet and visible	$\kappa = R_{\text{H}} \left(\frac{1}{2^2} - \frac{1}{n^2} \right) \quad n = 3, 4, 5, \dots$
Paschen	Infrared	$\kappa = R_{\text{H}} \left(\frac{1}{3^2} - \frac{1}{n^2} \right) \quad n = 4, 5, 6, \dots$
Brackett	Infrared	$\kappa = R_{\text{H}} \left(\frac{1}{4^2} - \frac{1}{n^2} \right) \quad n = 5, 6, 7, \dots$
Pfund	Infrared	$\kappa = R_{\text{H}} \left(\frac{1}{5^2} - \frac{1}{n^2} \right) \quad n = 6, 7, 8, \dots$