

n	ℓ	$R_{n\ell}(r)$
1	0	$R_{10}(r) = 2 \left(\frac{Z}{a_0} \right)^{\frac{3}{2}} e^{-\frac{Zr}{a_0}}$
2	0	$R_{20}(r) = 2 \left(\frac{Z}{2a_0} \right)^{\frac{3}{2}} \left[1 - \frac{Zr}{2a_0} \right] e^{-\frac{Zr}{2a_0}}$
	1	$R_{21}(r) = \frac{1}{\sqrt{3}} \left(\frac{Z}{2a_0} \right)^{\frac{3}{2}} \frac{Zr}{a_0} e^{-\frac{Zr}{2a_0}}$
3	0	$R_{30}(r) = 2 \left(\frac{Z}{3a_0} \right)^{\frac{3}{2}} \left[1 - \frac{2Zr}{3a_0} + \frac{2}{27} \left(\frac{Zr}{a_0} \right)^2 \right] e^{-\frac{Zr}{3a_0}}$
	1	$R_{31}(r) = \frac{4\sqrt{2}}{9} \left(\frac{Z}{3a_0} \right)^{\frac{3}{2}} \frac{Zr}{a_0} \left(1 - \frac{Zr}{6a_0} \right) e^{-\frac{Zr}{3a_0}}$
	2	$R_{32}(r) = \frac{2\sqrt{2}}{27\sqrt{5}} \left(\frac{Z}{3a_0} \right)^{\frac{3}{2}} \left(\frac{Zr}{a_0} \right)^2 e^{-\frac{Zr}{3a_0}}$
4	0	$R_{40}(r) = 2 \left(\frac{Z}{4a_0} \right)^{\frac{3}{2}} \left[1 - \frac{3Zr}{4a_0} + \frac{1}{8} \left(\frac{Zr}{a_0} \right)^2 - \frac{1}{192} \left(\frac{Zr}{a_0} \right)^3 \right] e^{-\frac{Zr}{4a_0}}$
	1	$R_{41}(r) = \frac{5}{2\sqrt{3}} \left(\frac{Z}{4a_0} \right)^{\frac{3}{2}} \frac{Zr}{a_0} \left[1 - \frac{Zr}{4a_0} + \frac{1}{80} \left(\frac{Zr}{a_0} \right)^2 \right] e^{-\frac{Zr}{4a_0}}$
	2	$R_{42}(r) = \frac{1}{8\sqrt{5}} \left(\frac{Z}{4a_0} \right)^{\frac{3}{2}} \left(\frac{Zr}{a_0} \right)^2 \left(1 - \frac{Zr}{12a_0} \right) e^{-\frac{Zr}{4a_0}}$
	3	$R_{43}(r) = \frac{1}{96\sqrt{35}} \left(\frac{Z}{4a_0} \right)^{\frac{3}{2}} \left(\frac{Zr}{a_0} \right)^3 e^{-\frac{Zr}{4a_0}}$