$$\psi = \underline{\quad} \exp\left(\frac{-r}{a_o}\right)$$

$$\psi(r=\infty) = 0$$

LOWEST ENERGY WAVEFUNCTION
FOR ELECTRONS.

$\psi_{(r)}$ vs r

FOR BOHR

$$r_n = a_o n^2$$

PROBABILITY OF FINDING AN ELECTRON ... ψ^2

$$\int_{r=p}^{r=p} R^2 r^2 \, dr = 0 \qquad \text{ALWAYS}$$

$$2 - \frac{r}{a_o} = 0, \quad \frac{r}{a_o} = 2$$
$$r = 2a_o$$

$$\psi_{1s} = \underline{\quad} \exp\left(\frac{-r}{a_o}\right)$$

$$\psi_{2s} = \underline{\quad} \left(2 - \frac{r}{a_o}\right) \exp\left(\frac{-r}{2a_o}\right) = 0$$

$$\psi_{3s} = \underline{\quad} \left(27 - 18\frac{r}{a_o} - 2\frac{r^2}{a_o^2}\right) \exp\left(\frac{-r}{3a_o}\right)$$