

$$V_n(R) = \frac{\pi^{n/2}}{(\frac{n}{2})!} R^n$$

$$S_n(R) = \frac{2 \pi^{n/2}}{\Gamma(\frac{n}{2})} R^{n-1}$$

$$\Gamma(r) = (r-1)!$$

$$\Gamma(\frac{n}{2}) = (\frac{n}{2}-1)!$$

$$\frac{dV_n(R)}{dR}$$

$$E - \frac{1}{2}\Delta, E + \frac{1}{2}\Delta$$

$$E - \frac{1}{2}\Delta \leq \sum_{i=1}^N \frac{p_i^2}{2m} \leq E + \frac{1}{2}\Delta$$

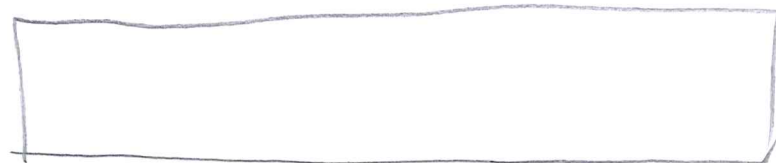
$$2m(E - \frac{1}{2}\Delta) < \leq 2m(E + \frac{1}{2}\Delta)$$

$$(2mE - m\Delta) < \leq (2mE + m\Delta)$$



$$\propto \Delta \left(\frac{m}{2E}\right)^{1/2} = \Delta \left(\frac{m}{2E}\right)^{1/2} \cdot \frac{2 \pi^{\frac{3N}{2}}}{(\frac{3N}{2}-1)!} \cdot (2mE)^{\frac{3N-1}{2}}$$

$$V_N$$



3.10
3.1

on the
outside