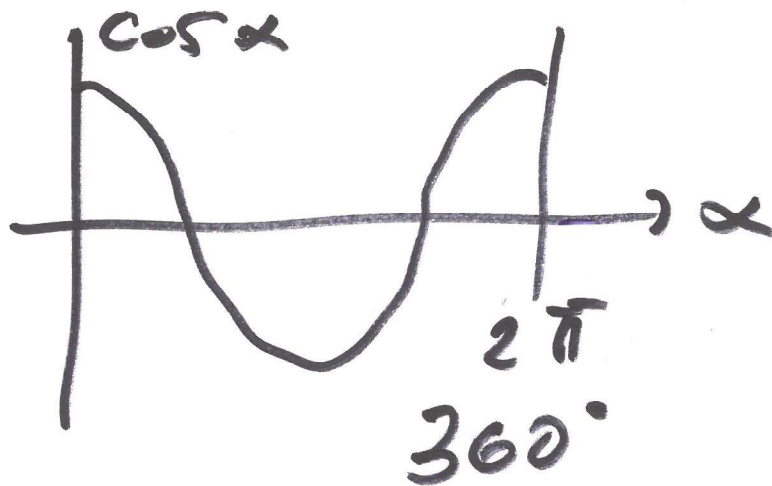




$$R_2^2 = l^2 + l^2 - 2 \cdot l \cdot l \cos \alpha$$



$$\overline{R_2^2} = 2l^2$$

$$\overline{R_2} = \sqrt{2} l$$

$$\vdots$$

$$\overline{R_n} = \sqrt{n} \cdot l$$

\uparrow \uparrow
 $t/\Delta t$ $v \cdot \Delta t$

$$\overline{R} \propto \sqrt{t}$$



$$\overline{R_n} = \sqrt{t \cdot v}$$

$$\bar{R} = \sqrt{3D t}$$

$$t = \frac{\bar{R}^2}{3D}$$

$$\frac{1 \mu\text{m}}{t} = \frac{1 \mu\text{m}^2}{3 \cdot 2 \cdot 10^{-9} \frac{\text{m}^2}{\text{s}}} = \frac{10^{-12} \text{m}^2}{6 \cdot 10^{-9} \frac{\text{m}^2}{\text{s}}}$$

$$\rightarrow \frac{1}{6} \cdot 10^{-3} \text{ s} = \frac{1}{6} \text{ ms} = 0,167 \text{ ms}$$

$$v = \frac{R}{t} = \frac{1 \mu\text{m}}{0,167 \text{ ms}} = 6 \text{ } \cancel{\mu\text{m}}/\text{s}$$

$$F_{ee} \neq -F_{chem}$$

$$\left[\frac{\Delta \psi}{\Delta x} \right] \neq - \frac{\Delta \mu}{\Delta x} \left[\frac{F/mol}{m} \right]$$

$$F = VAS = VC$$

$$\left[\frac{C}{m} \right] \frac{\Delta \psi}{\Delta x} F = - \frac{\Delta \mu}{\Delta x} \left[\frac{V \cdot C}{m \cdot mol} \right]$$

$$\Delta \psi F = -\Delta \mu$$

$$(\psi_1 - \psi_2) F = \mu_2 - \mu_1$$

$$\mu_1 = \mu_1 + \psi_1 F = \mu_2 + \psi_2 F = \mu_2$$

$$\psi_1 - \psi_2 = \frac{\cancel{\mu_0} + RT \ln \frac{c_2}{c_1} - \cancel{\mu_0} - RT \ln \frac{c_1}{c_2}}{F}$$

