

$$2 \quad c = \frac{Q}{\Delta T},$$

$$c = \frac{\Delta U + A}{\Delta T} = \frac{\Delta U}{\Delta T} + \frac{A}{\Delta T}$$

$$\frac{\Delta U}{\Delta T} = cV, \text{ поскольку } \perp \text{ моль ЧДА, то } cV = \frac{3}{2}R$$

$$V = Sx, \text{ где } S - \text{площадь сечения проволоки}$$

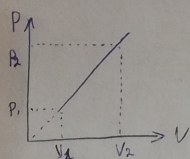
$$PV = RT,$$

$$Fy = kx,$$

$$PS - Fy = 0 \Rightarrow PS = kx;$$

$$\frac{V}{S} = \frac{RT}{kx} \Rightarrow \frac{Sx}{S} \Rightarrow T = \frac{kx^2}{R} = \frac{k}{R} \left(\frac{V}{S} \right)^2;$$

$$P(V) = \frac{RT}{V} = \frac{R}{V} \cdot \frac{k}{R} \cdot \left(\frac{V}{S} \right)^2 = \frac{k}{S^2} V;$$



$$P_1 = \frac{k}{S^2} V_1; P_2 = \frac{k}{S^2} V_2$$

$$A = \frac{P_2 + P_1}{2} (V_2 - V_1) = \frac{1}{2} \left(\frac{k}{S^2} V_2 + \frac{k}{S^2} V_1 \right) (V_2 - V_1) = \frac{1}{2} \frac{k}{S^2} (V_2^2 - V_1^2) = \frac{1}{2} \left(\frac{k}{S^2} V_2^2 - \frac{k}{S^2} V_1^2 \right);$$

$$\frac{k}{S^2} V^2 = RT \Rightarrow A = \frac{RT_2 - RT_1}{2} = \frac{R}{2} \Delta T;$$

$$\frac{A}{\Delta T} = \frac{R}{2} \Rightarrow c = \frac{3}{2}R + \frac{R}{2} = 2R$$

3. По известной проволке по известным меркам ток I_1 . После ток I_3 . По известным меркам ток I_2 .

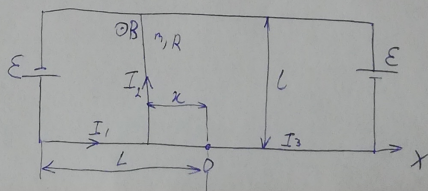
$$I_1 = I_2 + I_3$$

Изменение сопротивления будет:

$$2I_1 R = (L - x) + I_2 R = \epsilon$$

Второе:

$$2I_3 R (L + x) - I_2 R = \epsilon$$



$$I_2 = - \frac{x\epsilon}{p(L^2 - x^2) + RL};$$

$$\frac{x}{L} \ll 1;$$

$$I_2 \approx - \frac{x\epsilon}{pL^2 + RL};$$

$$F_A = I_2 B L = - \frac{x B L \epsilon}{pL^2 + RL},$$

$$m_{ax} = - \frac{x B L \epsilon}{pL^2 + RL} \Rightarrow m_{ax} + X \left(\frac{B L \epsilon}{pL^2 + RL} \right) = 0; \text{ max uah } x'' + \omega_0 x = 0 \Rightarrow$$

$$\omega_0 = \sqrt{\frac{B L \epsilon}{pL^2 + RL}} \Rightarrow T = 2\pi \cdot \sqrt{\frac{pL^2 + RL}{B L \epsilon}}; \text{ Dimes: } T = 2\pi \sqrt{\frac{pL^2 + RL}{B L \epsilon}};$$

N4 Glyc6 l-glyukoz maqsimuna;

$$T = 2\pi \sqrt{\frac{L}{g}} \approx \frac{N}{f}$$

$$L = \frac{g N^2}{4\pi^2 f^2} \approx 7 \mu\text{m}$$

$L_0 \ll L \Rightarrow L \gg F$, F-qo'nyen. faroshaime;

$$\frac{L}{L_0} \approx \frac{L_0}{F};$$

$$L = \frac{FL}{L_0} = \frac{F g N^2}{4\pi^2 f^2 L_0} = \frac{7 \cdot 10^{-2} \text{ m} \cdot 10 \text{ m/s}^2 \cdot 48^2}{4 \cdot 3,14^2 \cdot 24 \cdot 10^{-2}} \approx 7 \mu\text{m}$$