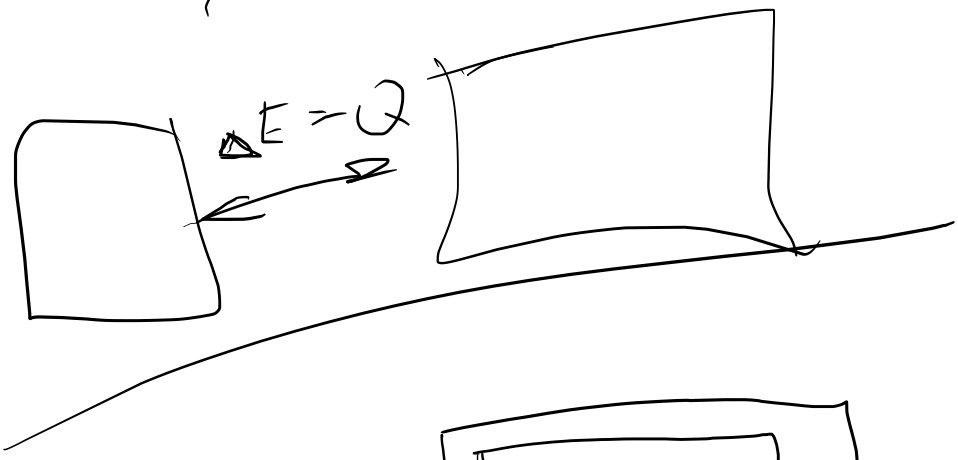
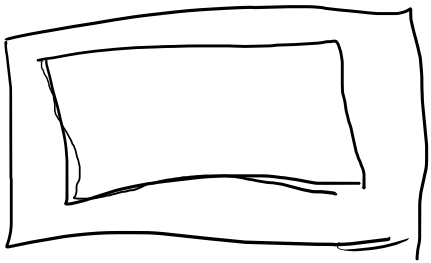
$Q = \Delta U + A$

$Q = \Delta U + A$

S T P, V





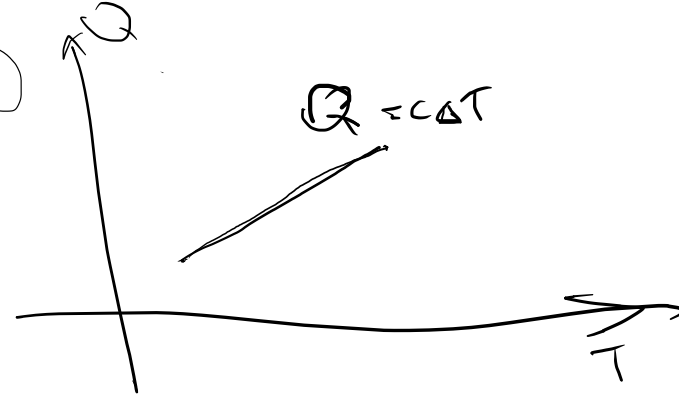
$$C = \frac{\Delta Q}{\Delta T} = \text{const} \rightarrow C\Delta T$$

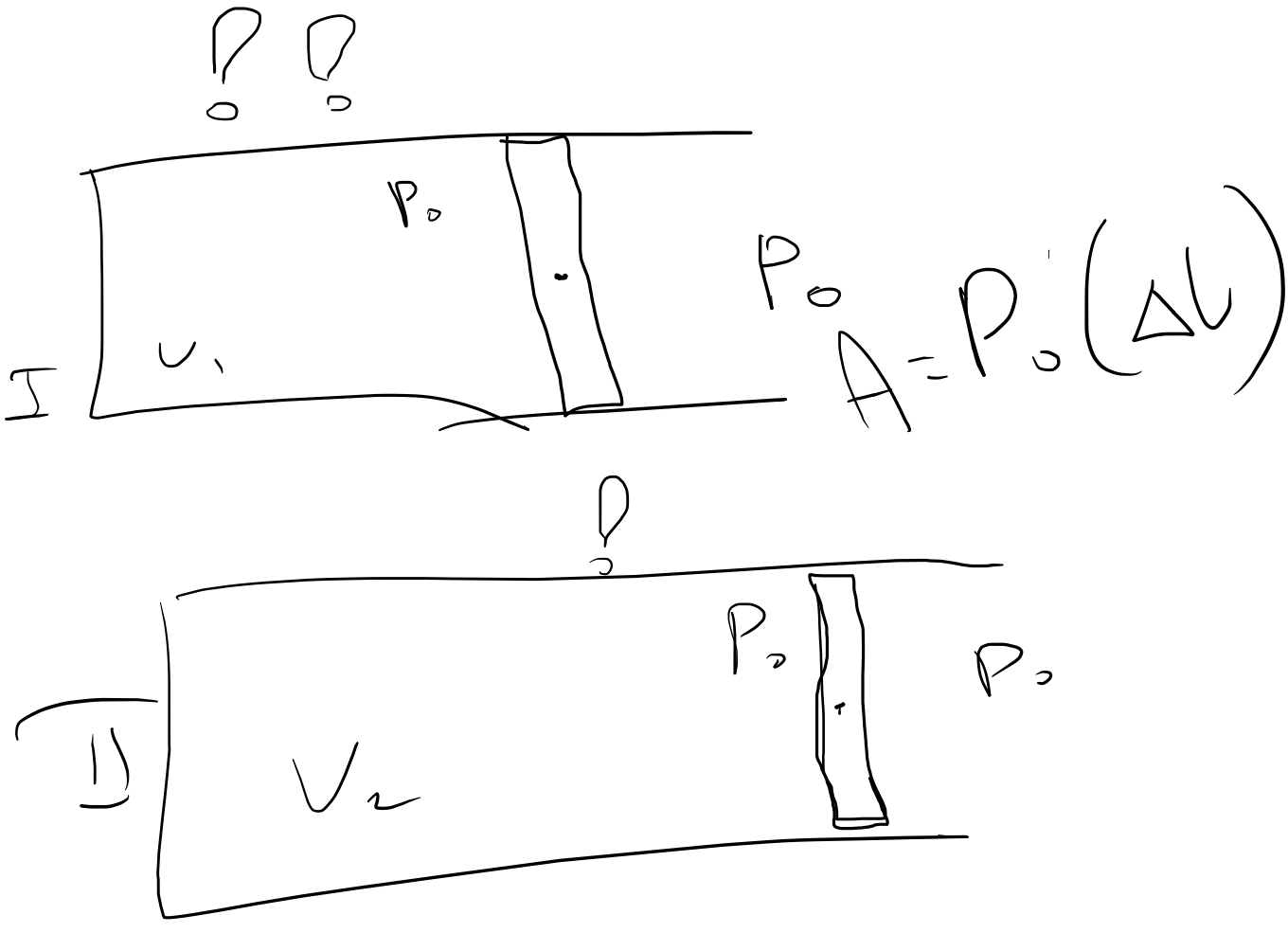
$V_1 = 10\,\text{л}$ $\quad T = 300\,\text{K}$

$V_2 = 20 V_1$

$\Delta Q = \Delta U + A$

$C\Delta T = \Delta U + A$




I
V_1
P_0
P_0
$A = P_0(\Delta V)$
II
V_2
P_2
P_2

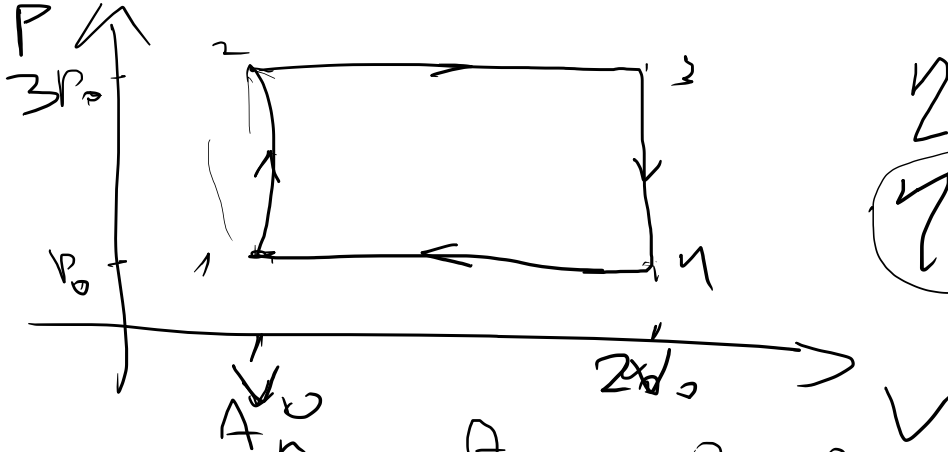
$$C\Delta T = \Delta U + A$$

$$C\Delta T = \frac{3}{2} R \Delta T + P\Delta V$$

$$P_0 V_1 = \nu R T_1$$

$$P_0 V_2 = \nu R T_2$$

$$P(V_2 - V_1) = P_0 19 V_1$$



$\eta_T[KMD] \leq 1$

η_x

$$\eta = \frac{A_n}{A_{3ATP}} = \frac{A_n}{Q_+} = \frac{Q_+ + Q_-}{Q_+}, \quad Q_- \leq 0$$

$A_n = A_2$

$A_{3ATP} = |A_+| + |A_-|$

$A_+ = A_{23}$

$A_- = A_{41}$

$A_+ = 3P_0V_0$

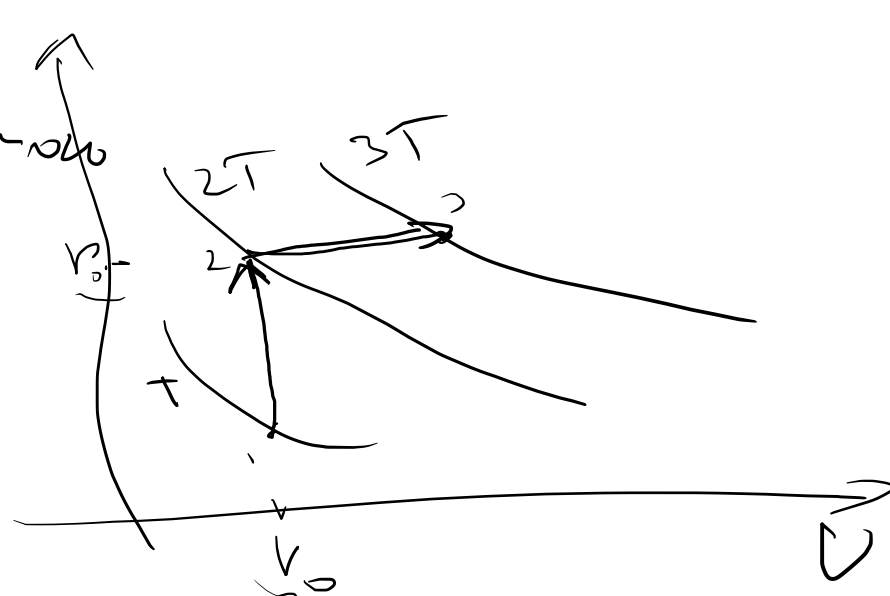
$A_- = P_0V_0$

$$\eta = \frac{2P_0V_0}{4P_0V_0}$$

3 A) 3

$\nu = 2$ mole

$$\frac{Q_{12}}{Q_{23}}$$



$$Q_{12} = \Delta U + \cancel{A} = \frac{3}{2}\nu R T$$

$$Q_{23} = \Delta U + A = \frac{3}{2}\nu R T + P_0 \Delta V$$

$$P_0 \Delta V = P_0 (V_3 - V_2) = P_0 V_3 - P_0 V_2$$

$$P_0 V_2 = 3nRT$$

$$P_0 V_1 = 2nRT$$

$$P_0 \Delta V = nRT$$

$$Q_{23} = \frac{3}{2}nRT + nRT = \left(\frac{3}{2}+1\right)nRT$$

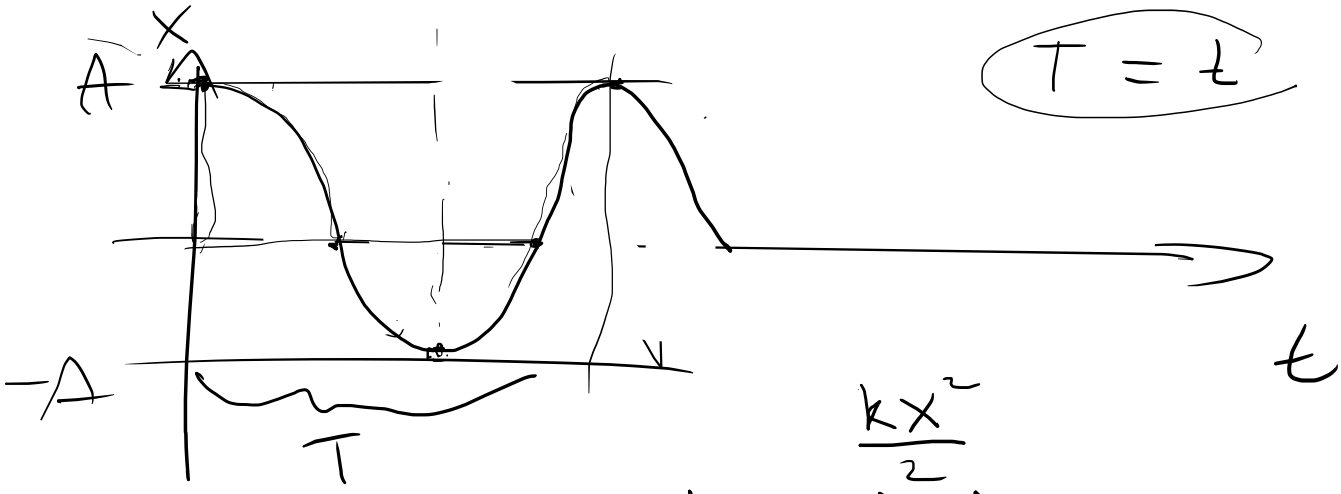
$$Q_{12} = \frac{3}{2}nRT$$

$$\frac{Q_{12}}{Q_{23}} = \frac{\frac{3}{2}nRT}{\frac{5}{2}nRT} = \frac{3}{5}$$

2

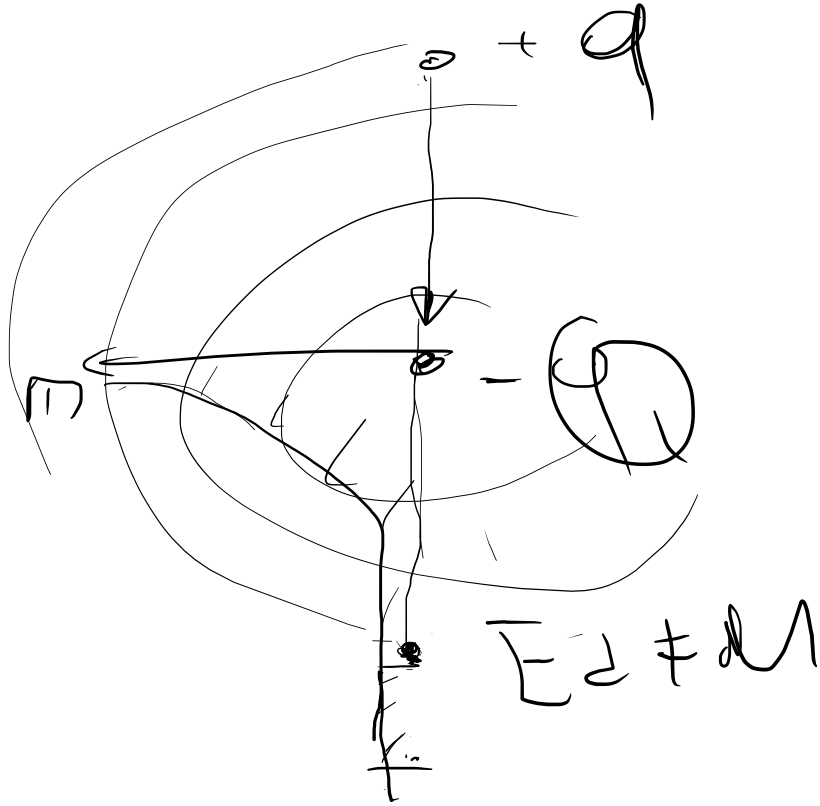
$$x = A\cos \frac{2\pi}{T} t$$

$$T = t$$



$$\frac{kx^2}{2}$$

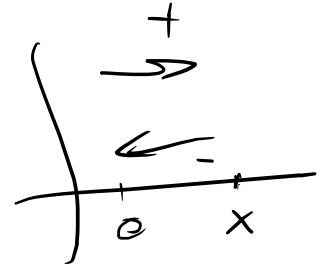
$$A = (F \cdot S)$$



i

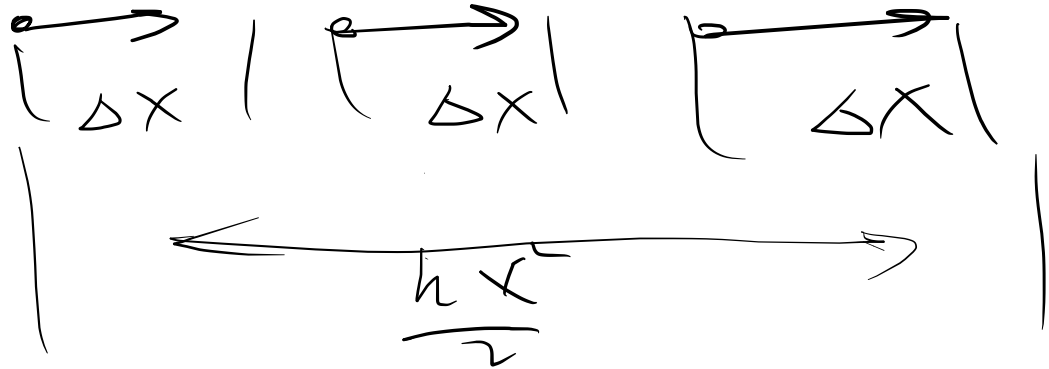
$$A = \int_{x}^{0} F\,dx = \int_{x}^{0} kx\,dx =$$

$F = kx$

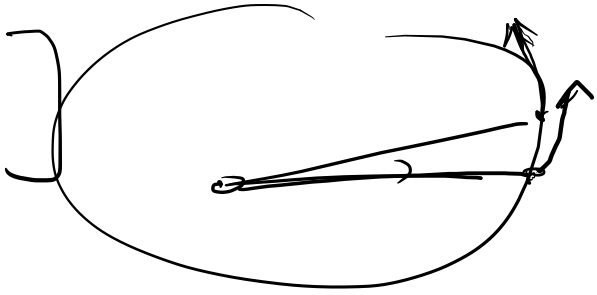


$$= \frac{-kx^2}{2}$$

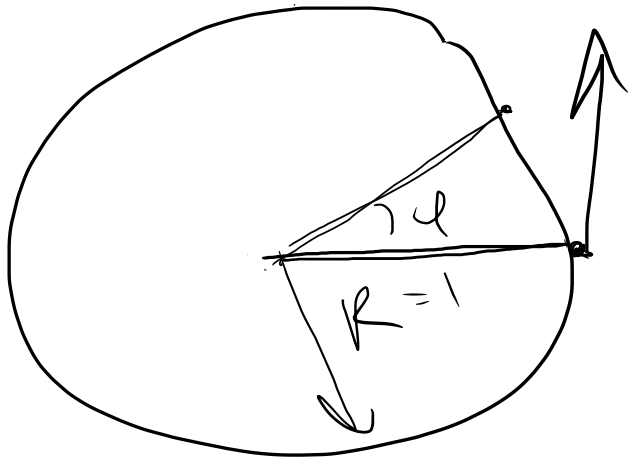
$F_1 = kx_1$ $F_2 = kx_2$ $F_3 = kx_3$



$$\omega = \frac{d\varphi}{dt} \left[c^{-1} \right]$$



$$\omega = \frac{v}{R} = \frac{\gamma c}{\gamma \lambda} = c^{-1}$$



$$\omega = \frac{2\pi}{T}$$

$$v = s t$$

$$v = s T$$

$$v = 2\pi R T$$

$$T = \frac{v}{2\pi R}$$

$$\omega = \frac{v}{R}$$

$$\eta = \frac{A_t}{Q_+}$$

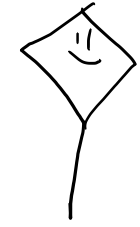
$$Q = \Delta U_{12} + A_{12} + A_{23} + A_{34} + A_{41}$$

$$Q_+ = A_{23} + A_{41} = 3p_0V_0 + p_0V_0$$

$$= 4p_0V_0$$

Подумать

- ОММО - скат



- МФТИ
- ...

Посмотреть

Задание:

Дорешать все что не дорешал,
* оформить первые 5 задач из /lib/workshop/workshop-5

Из /lib/fizika20180402real-fipi.pdf решить 8-10,12, 30