

I. $\vec{N} + m\vec{g} + \vec{F}_{TP} + \vec{F} = 0$

Ox: $F - F_{TP} = 0$

$F = F_{TP}$

Oy: $-N + mg = 0$

$N = mg$

II. $\vec{N}_2 + 2m\vec{g} + \vec{F} + \vec{F}_{TP} = 0$

Ox: $F - F_{TP} = 0$

$F = F_{TP}$

Oy: $-N_2 + 2mg = 0$

$N_2 = 2mg$

$F_{TP} = \mu \cdot N \cdot g$

$F_{TP} = \mu \cdot N$

Т.к. масса первого груза меньше массы второго, то он будет проскальзывать по поверхности второго груза.

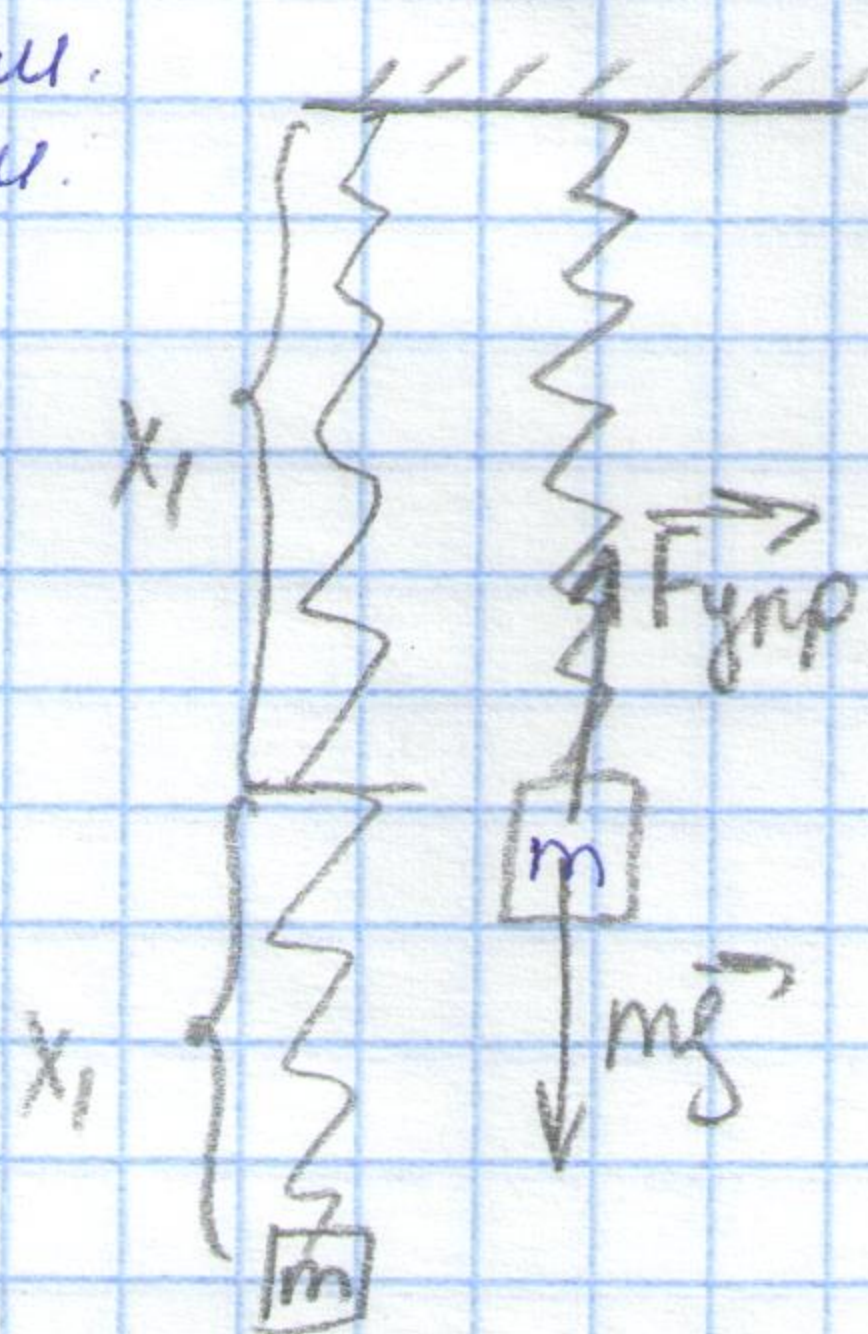
$F_{TP} = \mu \cdot m \cdot g$

$F_{TP} = \mu \cdot N_1$

Подвижный блок даёт выигрыш в силе в 2 раза

$F = \frac{\mu \cdot m \cdot g}{2}$

- 2. $x_1 = 6 \text{ см} = 0,06 \text{ м}$.
- $x_2 = 2x_1 = 0,12 \text{ м}$.
- $A = 1 \text{ Дж}$.
- $k = ?$



$\vec{F}_{упр} + m\vec{g} = 0$

Oy: $mg = F_{упр}$

$F_{упр} = k \cdot x_1$

$A = F \cdot S$

$A = k \cdot x_1 \cdot x_1 = k \cdot x_1^2$

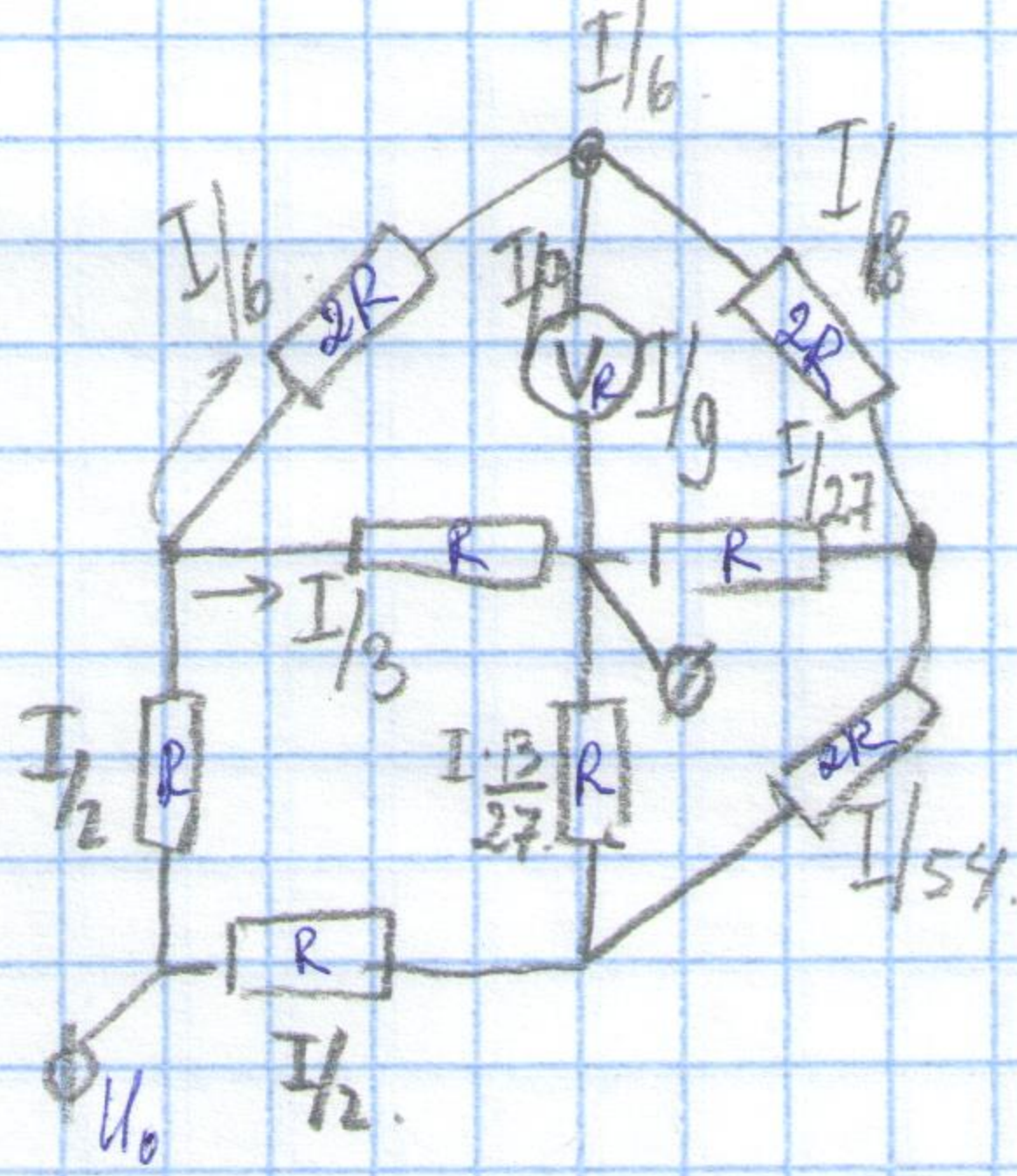
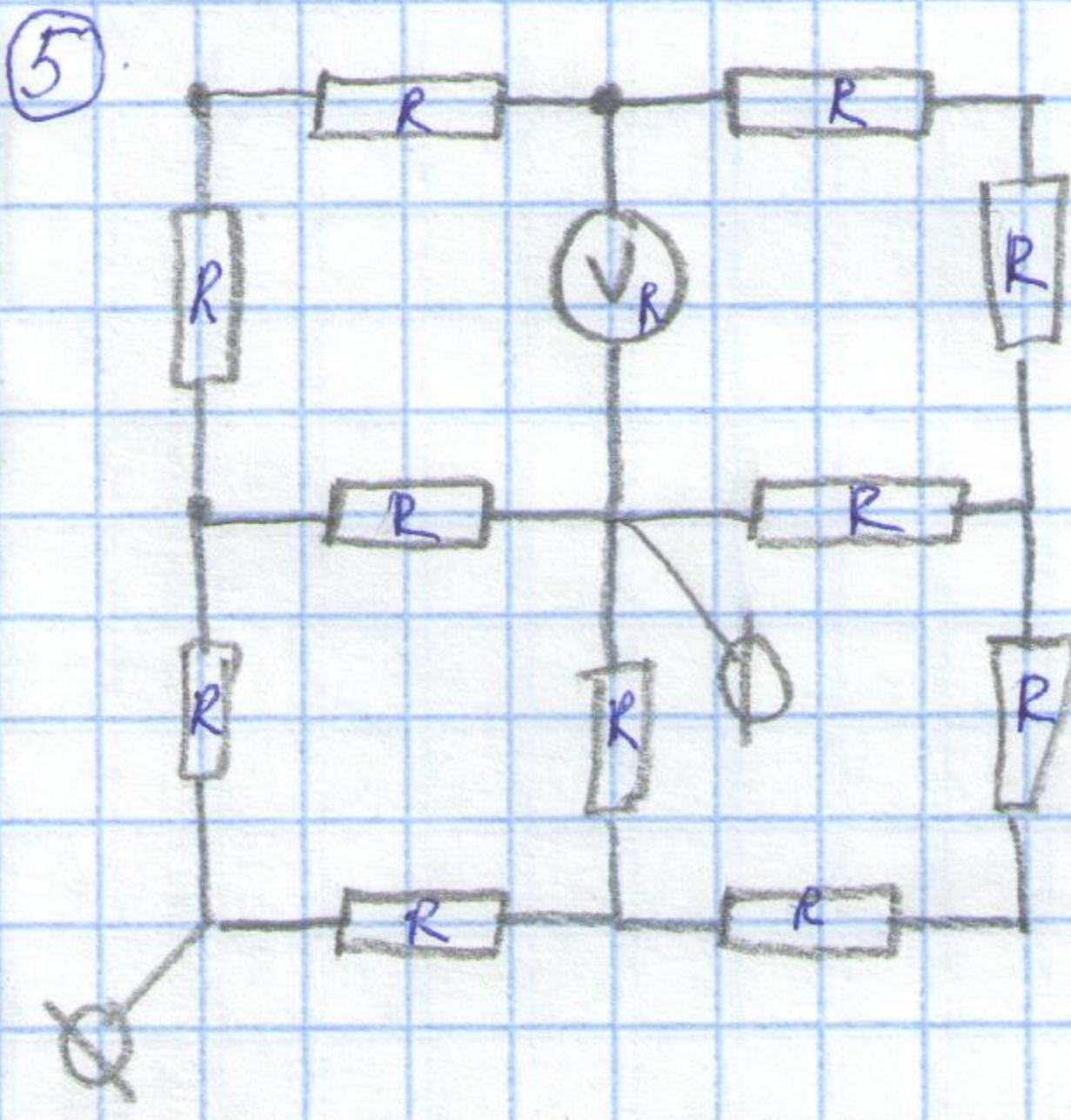
$k = \frac{A}{x_1^2} = \frac{1}{0,0036} = 277,78 \text{ Н/м}$

③. $ABH = 100 \text{ Дж.}$
 $\Delta U = 80 \text{ Дж.}$
 $\Delta t = 10^\circ \text{C.}$
 $C = ?$

$Q = \Delta U + A'$
 $\Delta U = Q + ABH.$

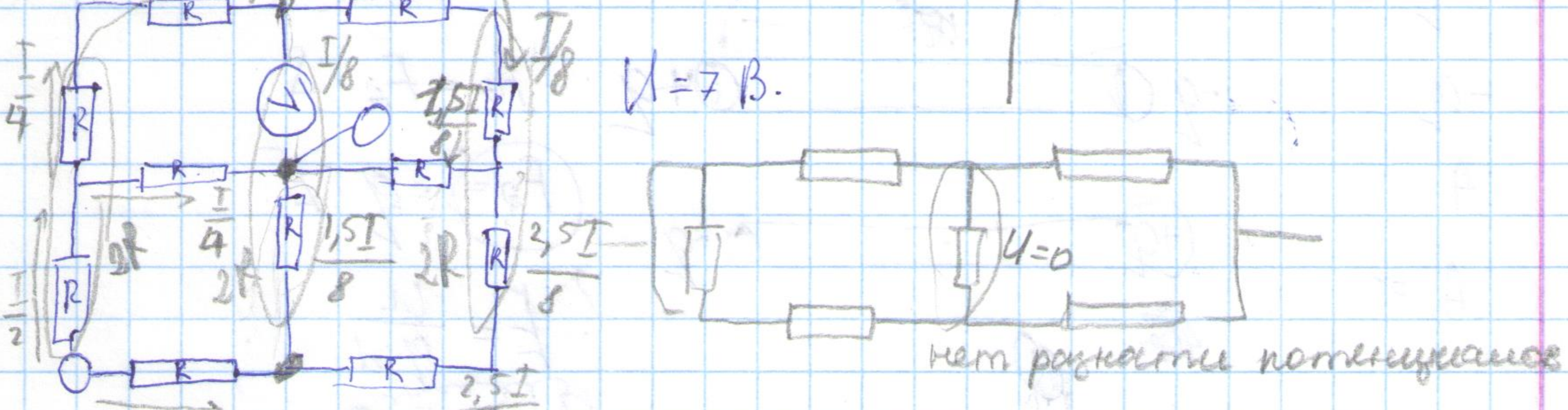
$\Rightarrow Q = |\Delta U - ABH| = |80 - 100| = 20 \text{ Дж.}$

$Q = c \cdot m \cdot \Delta t.$
 $20 = c \cdot m \cdot 10$
 $c = \frac{2}{m}.$



$E = U_0 = 7R.$
 $I_V = \frac{I}{9} \text{ A}$
 $U = I \cdot R$
 $U_B = \frac{I}{9} \cdot R.$
 $= \frac{7}{9} = 0,8B$

6 шлиц в 2 раза, т.е. $F = \frac{U \cdot m \cdot g}{2}$.



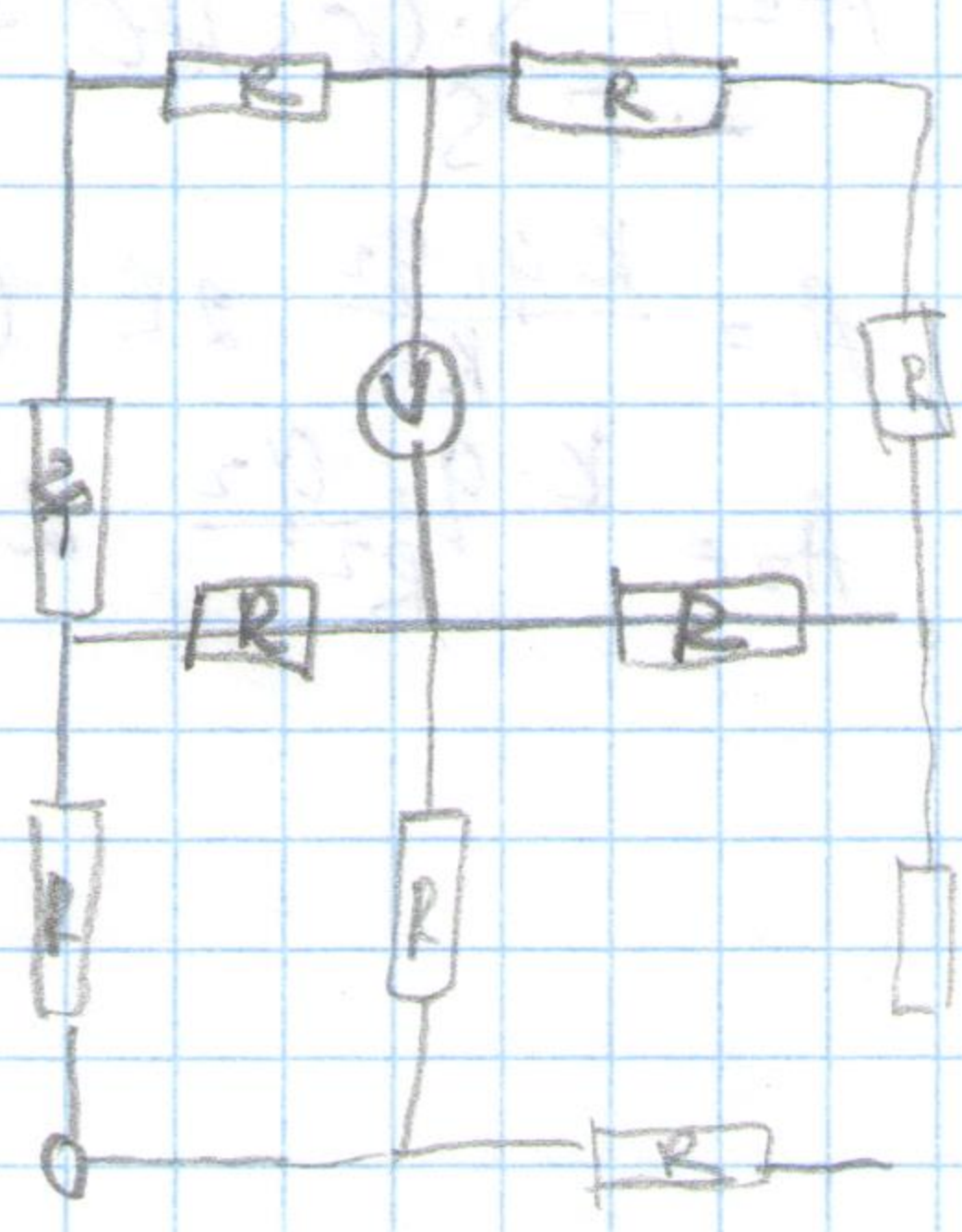
$$\frac{I}{4} + \frac{1.5I}{8} = \frac{2.5I}{8}$$

$$\frac{I}{8} + \frac{1.5I}{8} = \frac{2.5I}{8}$$

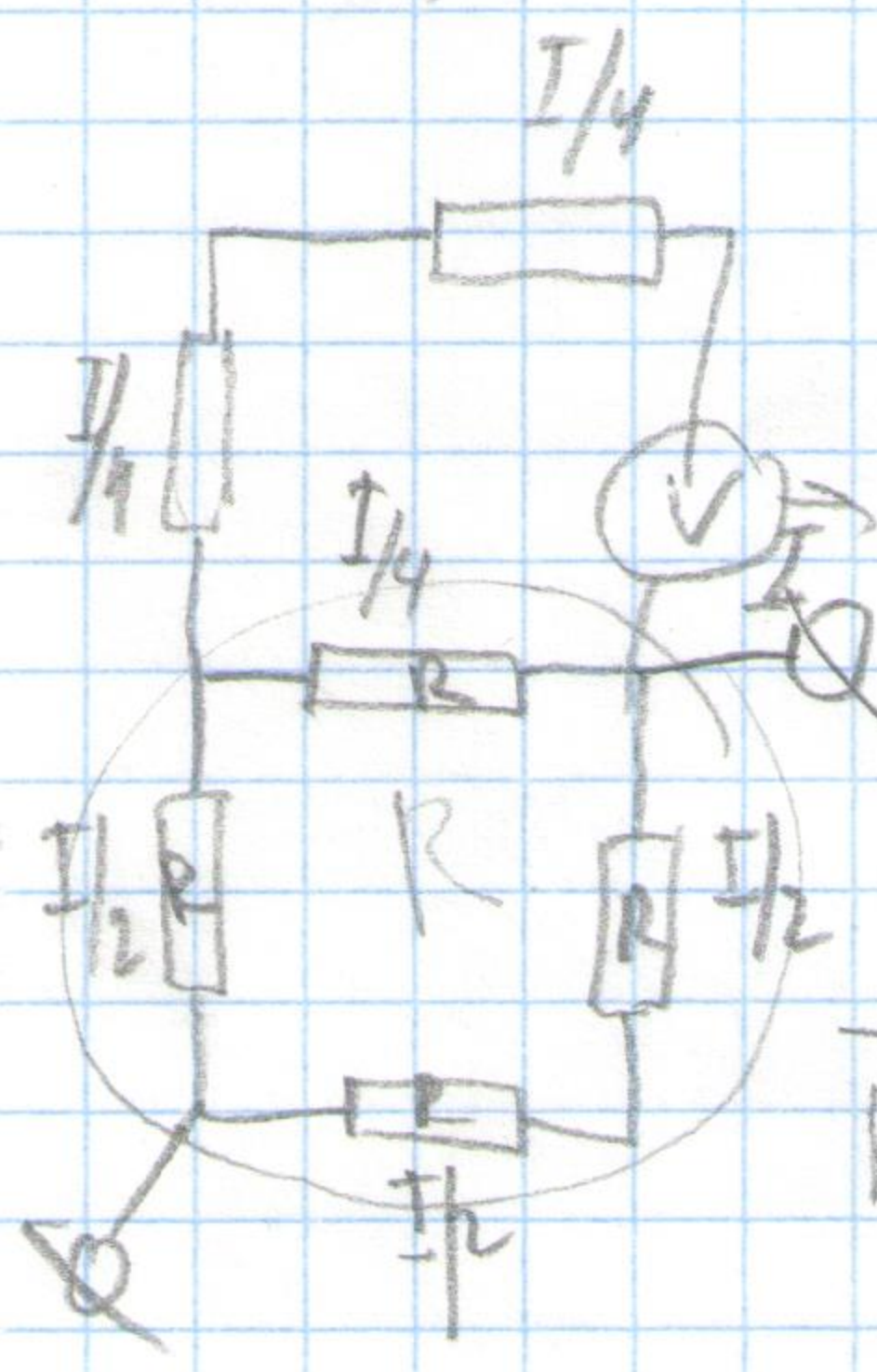
$U = 7B$. *напряжение* $\Rightarrow U_1 = U_2 = U_3 = U$

$I = \frac{U}{R}$ $U = I \cdot R$ $7B = I \cdot R$

На V: $I_2 = \frac{I}{8}$.



$$\begin{array}{r} 4 \overline{) 4} \\ 4 \\ \hline 0 \\ 30 \\ 20 \\ \hline 20 \end{array}$$

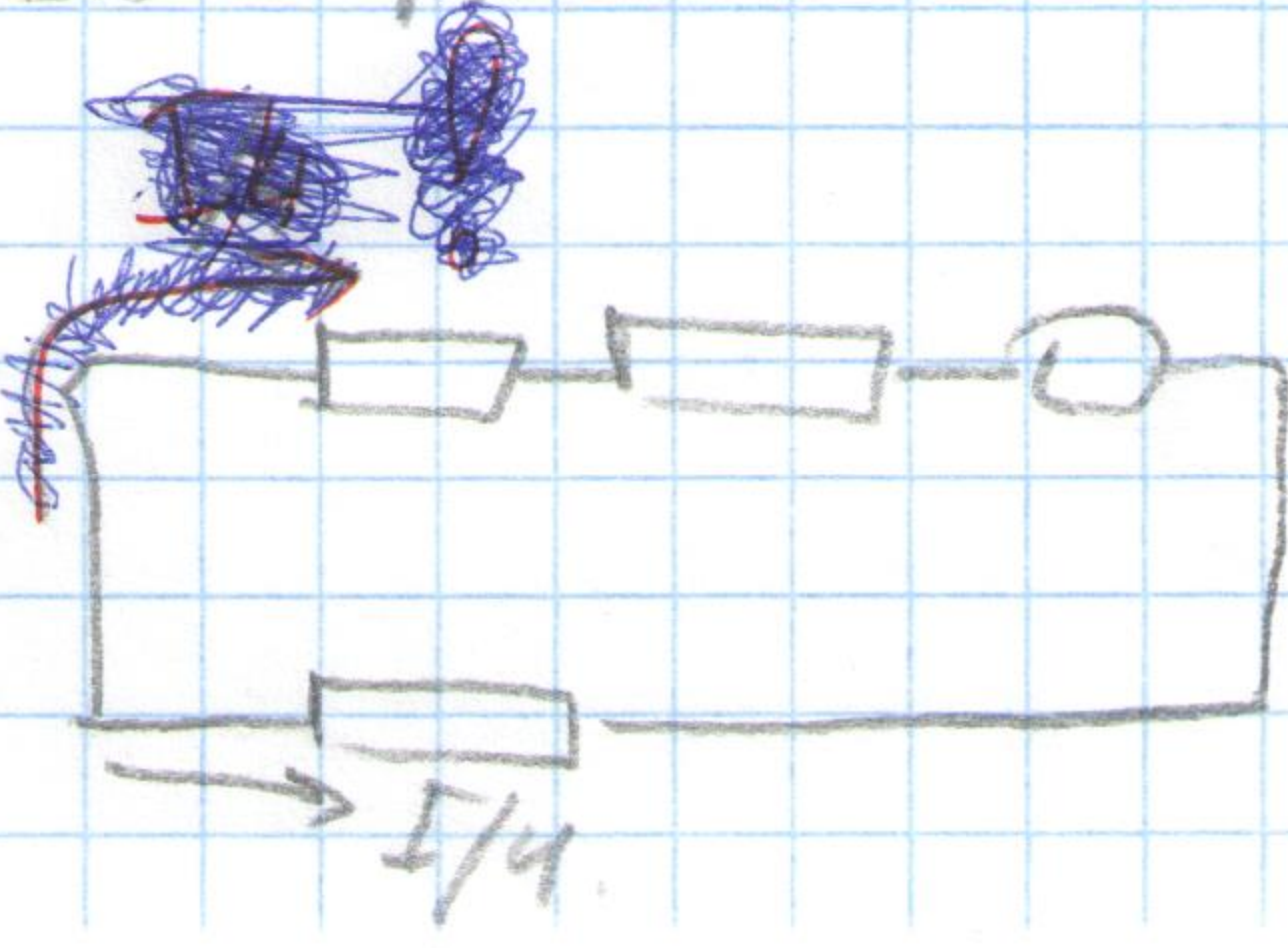


$$\frac{1}{R_0} = \frac{1}{2R} + \frac{1}{2R} = \frac{2}{2R} = \frac{1}{R}$$

$$\frac{1}{R_0} = \frac{1}{R} + \frac{1}{3R} = \frac{4}{3R}$$

$$R_0 = \frac{3R}{4}$$

$$U = \frac{I}{4} \cdot R = \frac{7}{4}$$



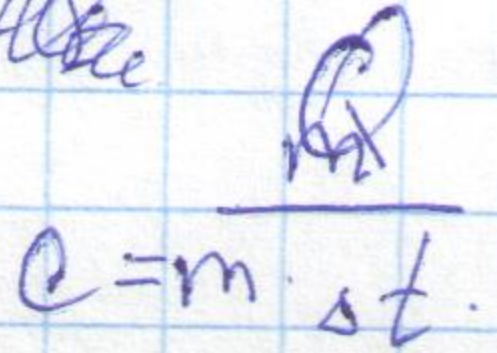
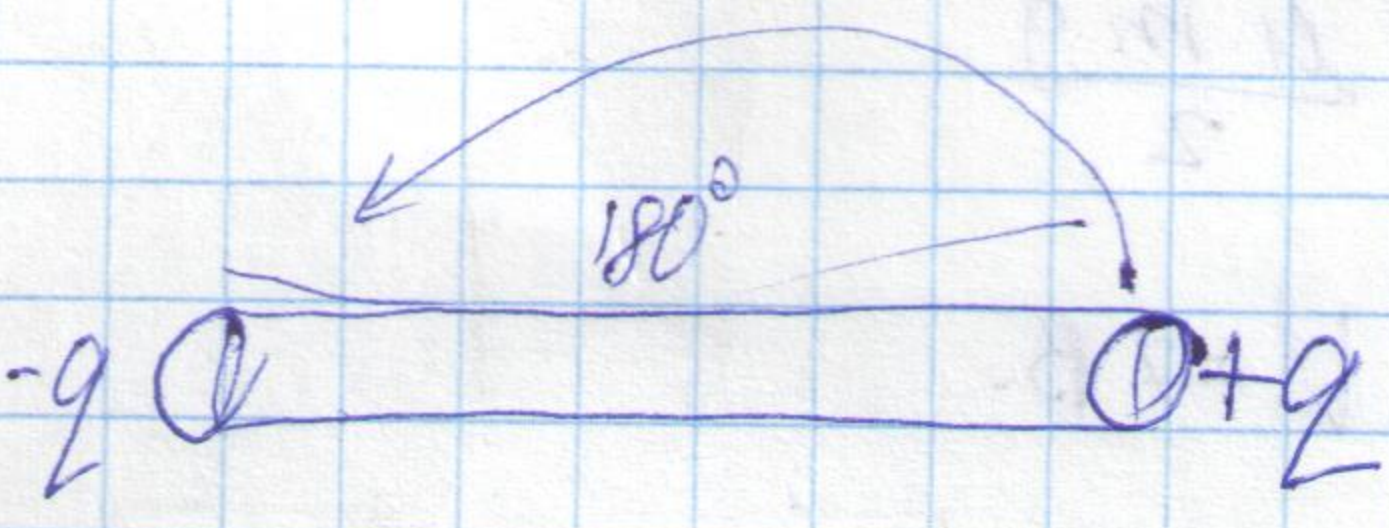
+q

-q

A

A₁ = ?

c = ?



$$F = k \frac{q_1 \cdot q_2}{R^2}$$

$$A_2 = F_2 \cdot S$$

$$F_2 = q \cdot E$$

$$E = \frac{U}{q \cdot d}$$

$$U = q \cdot E \cdot d$$

$$F_2 = q \cdot E$$

~~$$A = q \cdot E \cdot d$$~~

$$A = q \cdot E \cdot S$$

$$A = F \cdot S \cdot \cos 180^\circ = -F \cdot S$$

$$A_1 = \frac{k \cdot q_1 \cdot q_2}{R^2} \cdot 2R \cdot \cos 180^\circ$$

$$A_2 = \frac{k \cdot q_1 \cdot q_2}{R^2} \cdot 2R \cdot R \cdot \cos 180^\circ$$