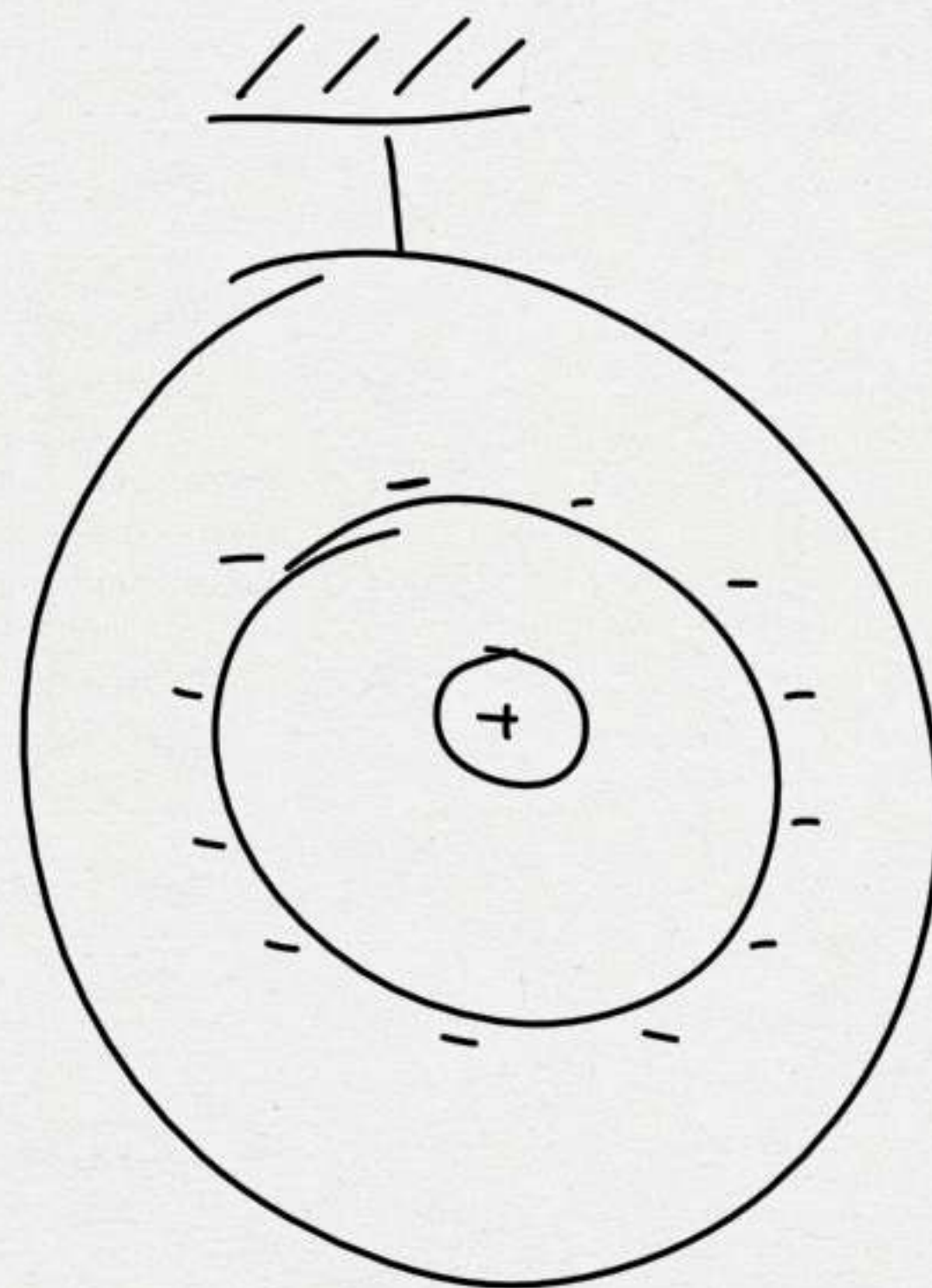
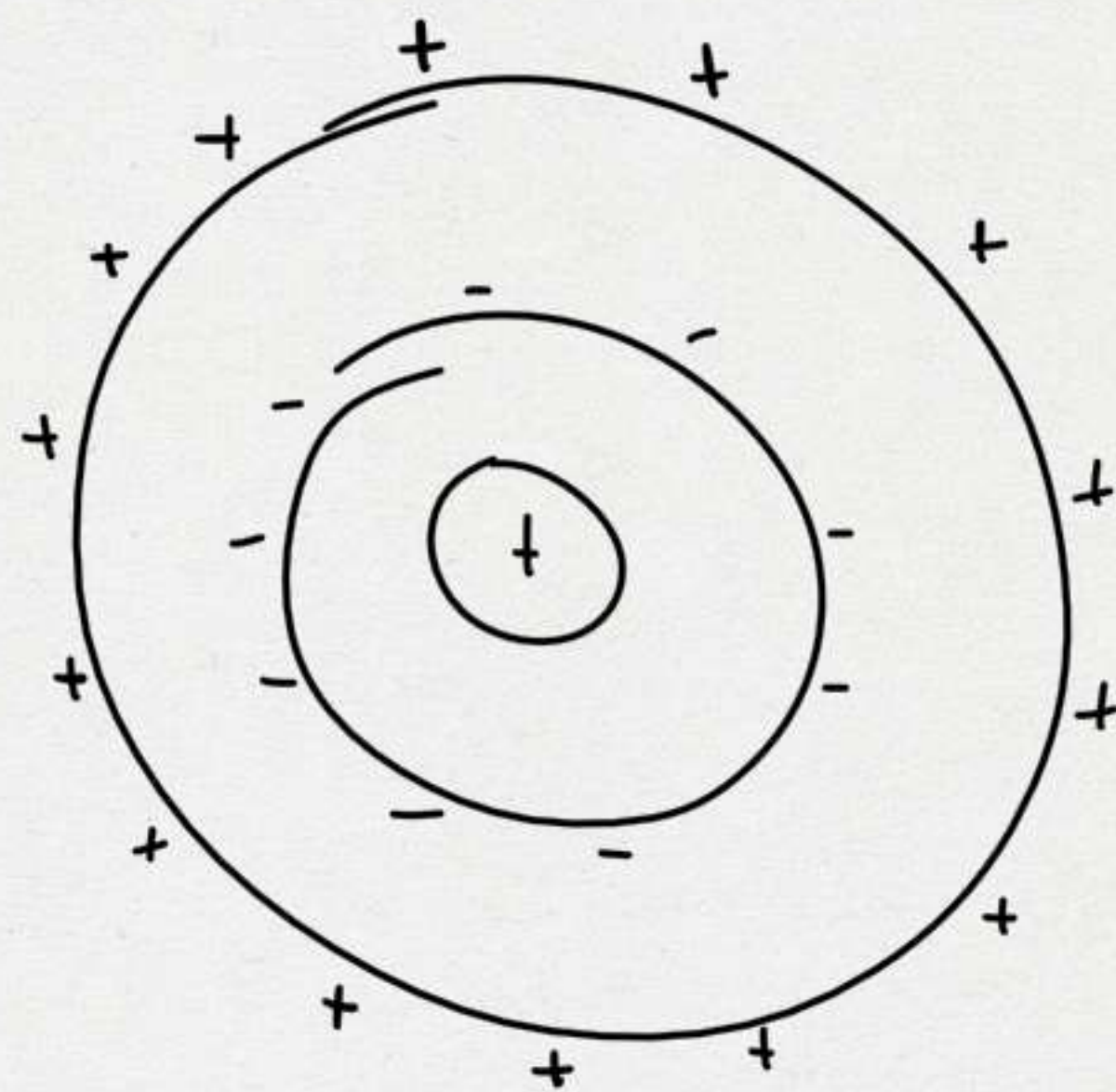
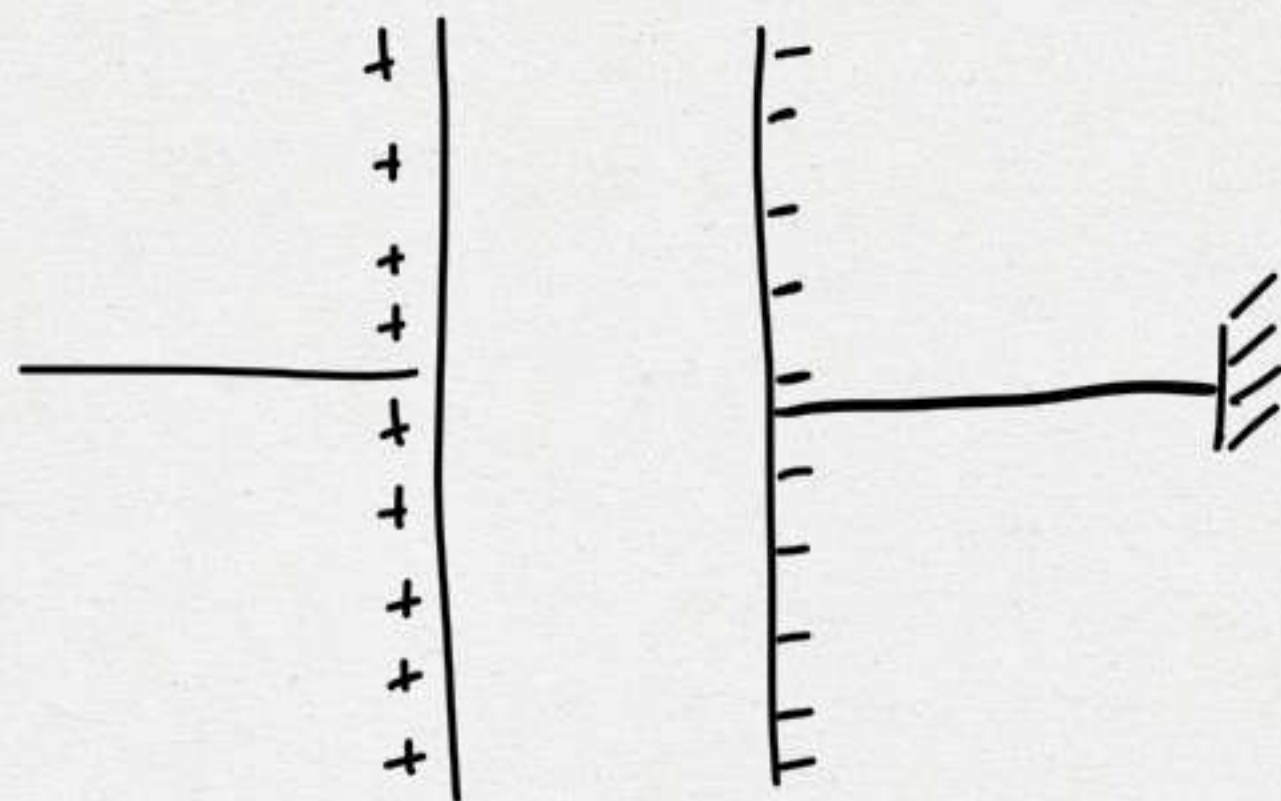


$$\begin{aligned} \hookrightarrow \varepsilon &= R_i i + R i \Rightarrow R_i i + R i - \varepsilon = 0 \\ \varepsilon - R_i i - R i &= 0 \end{aligned}$$

$$\hookrightarrow -\varepsilon = -R_i i - R i$$

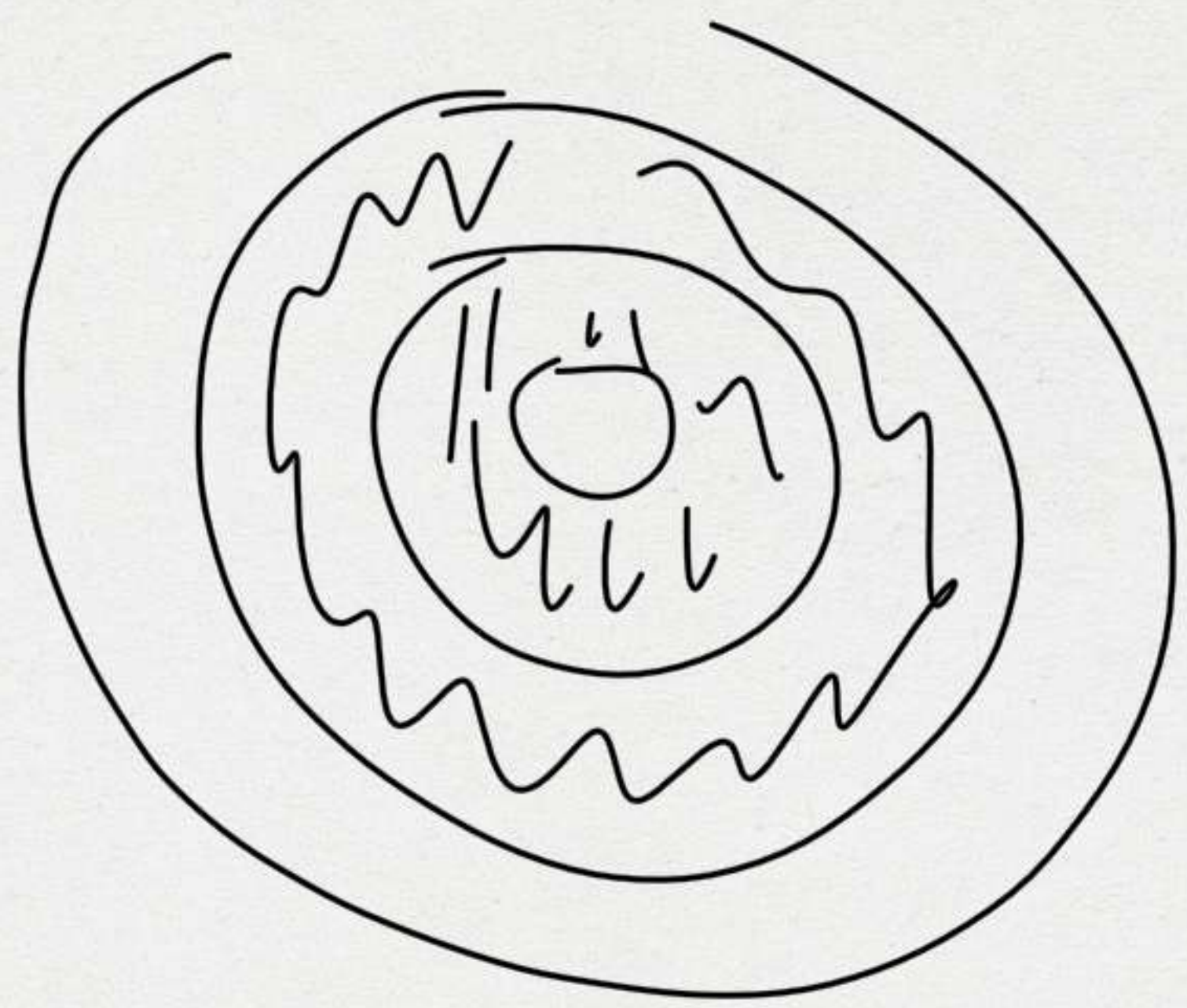
ANTI-ORAPL

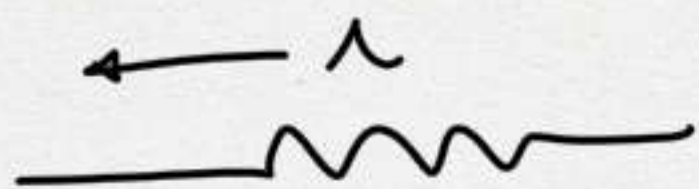
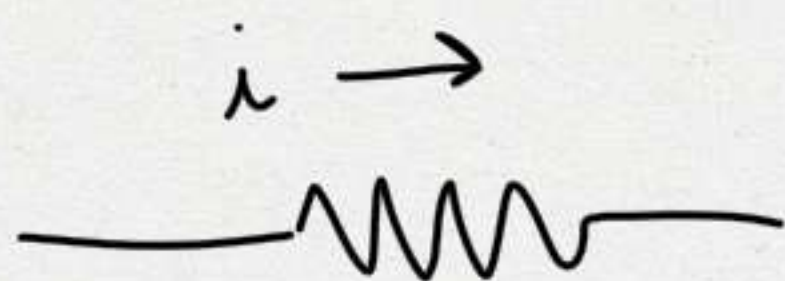
$$\hookrightarrow \varepsilon = R_i i + R i$$



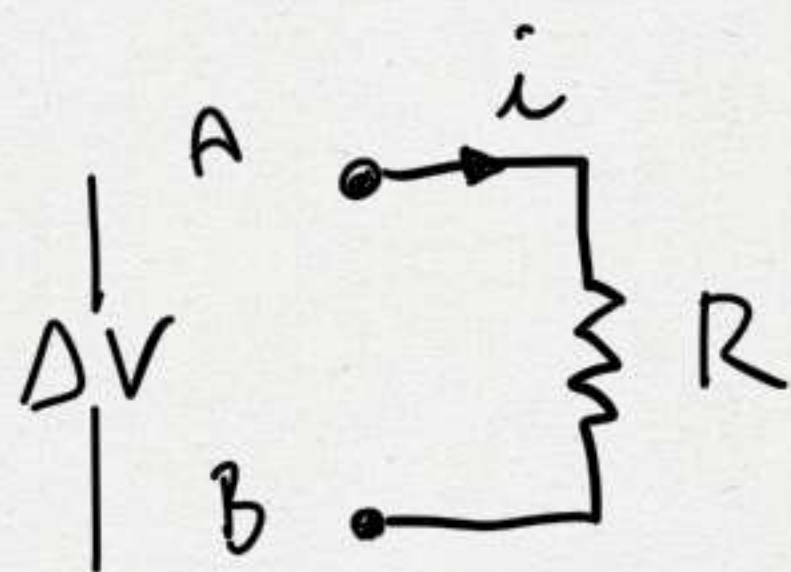
$-g_0$

$+g_0$





$$\Delta V = R i \Rightarrow i = \frac{\Delta V}{R}$$

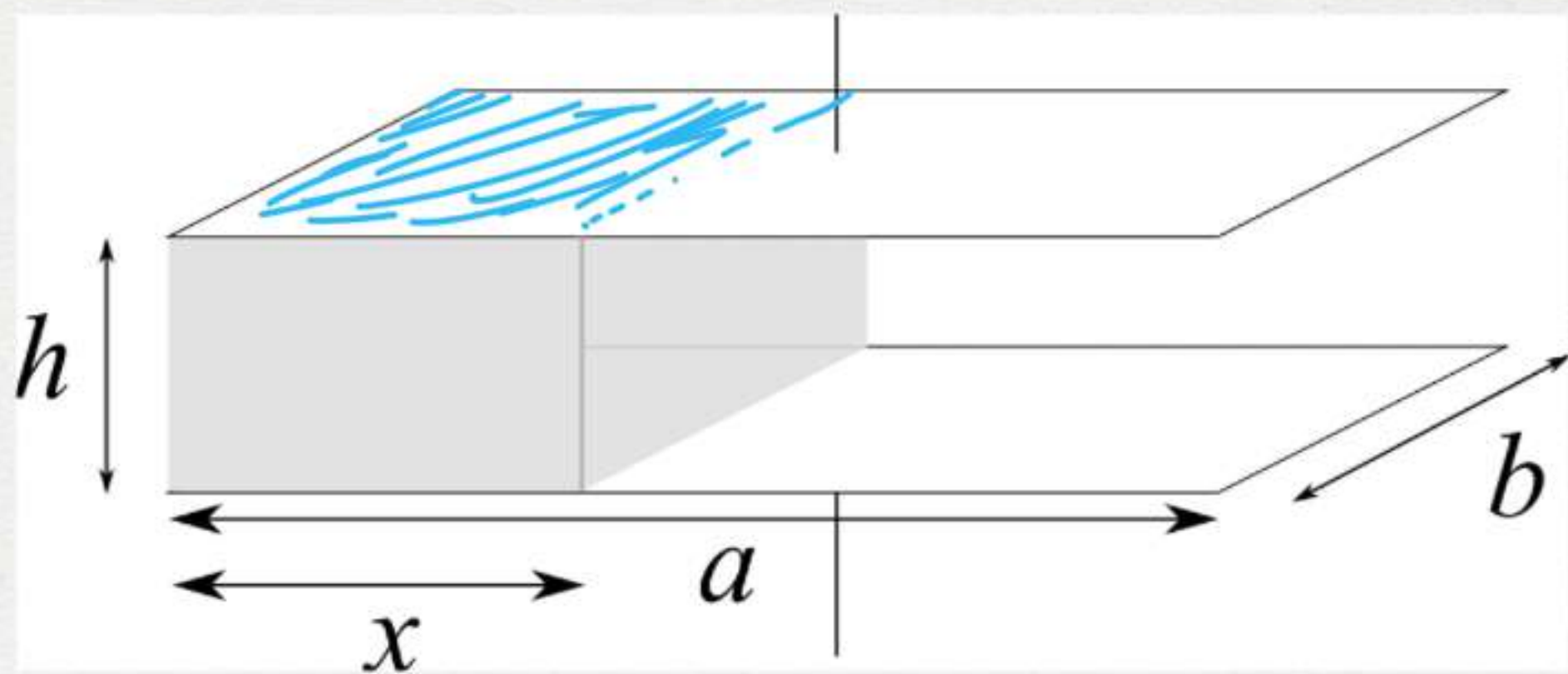


$$R = 1 \Omega, i = 10 A$$

$$R = 10 \Omega, i = 1 A$$

$$P = \overbrace{\Delta V i} = \underbrace{R i^2} = \frac{\Delta V^2}{R}$$

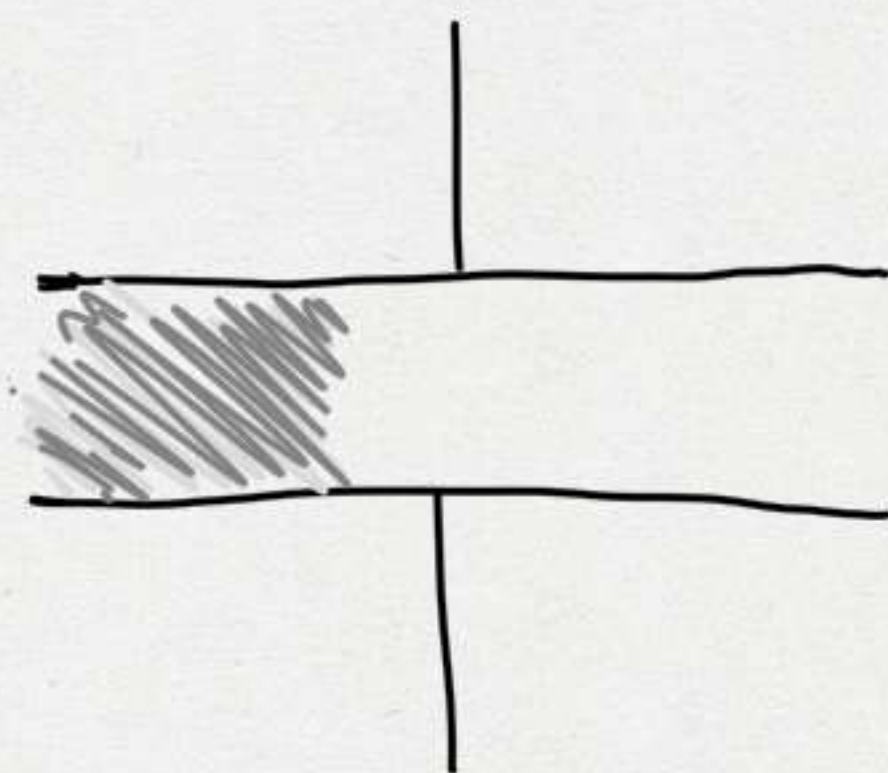
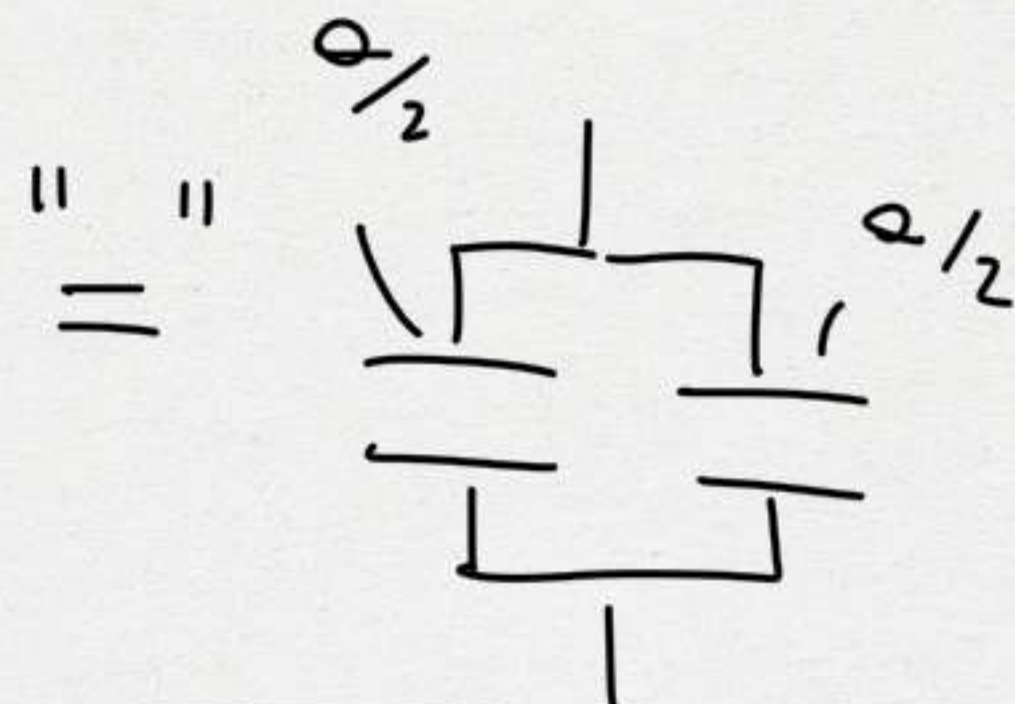
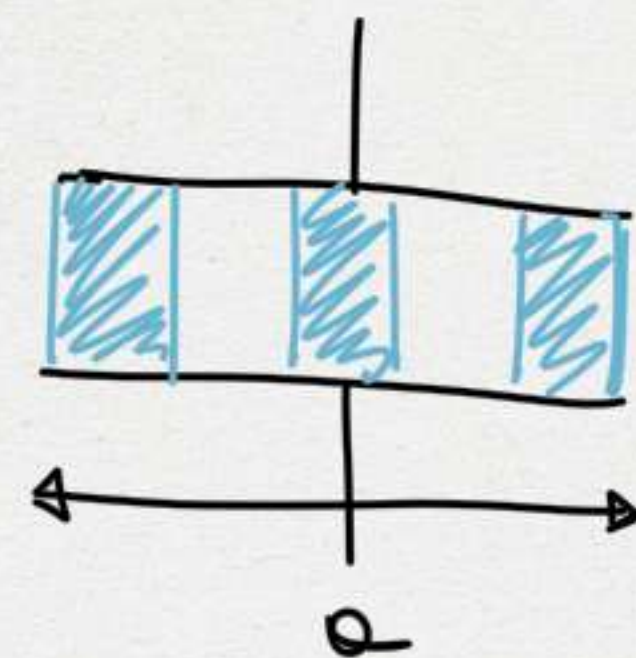
↑



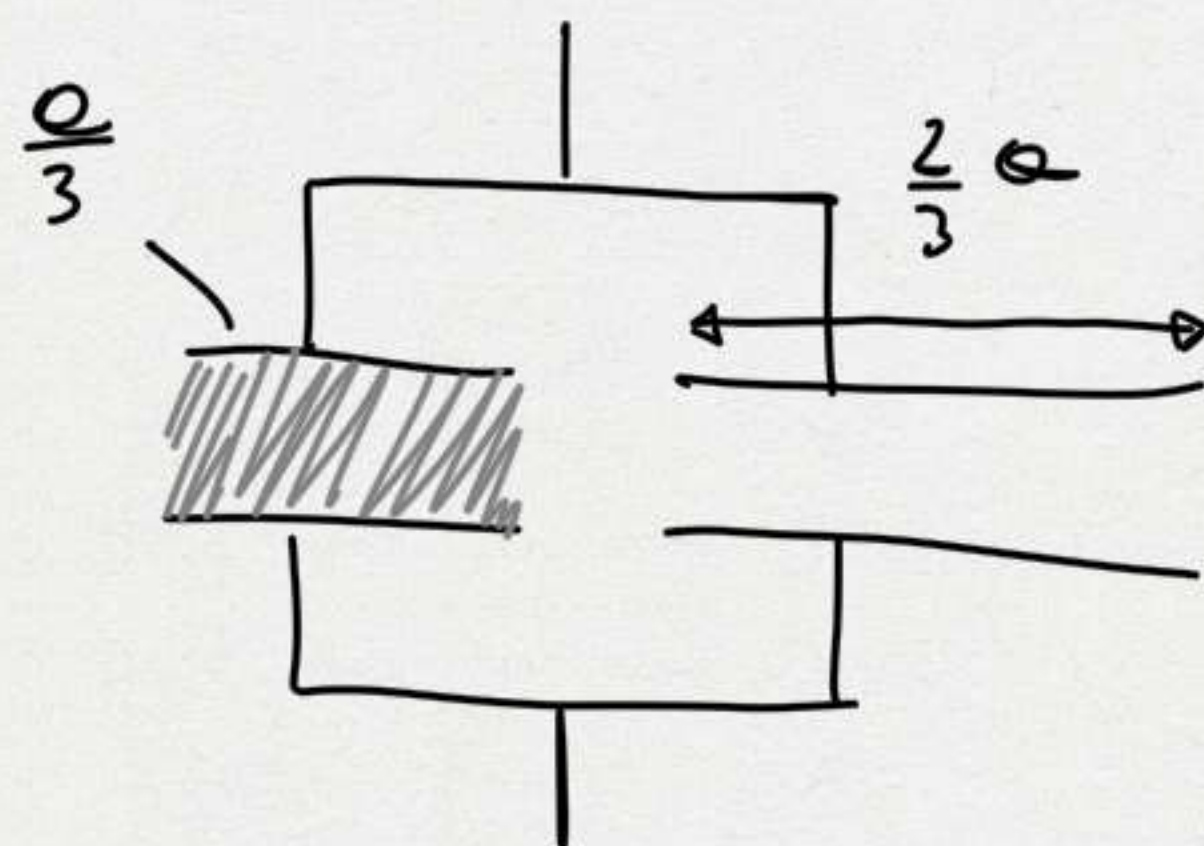
$$x = \frac{2}{3} \rho$$

$$K, \Delta V$$

$$Q_d = ?$$

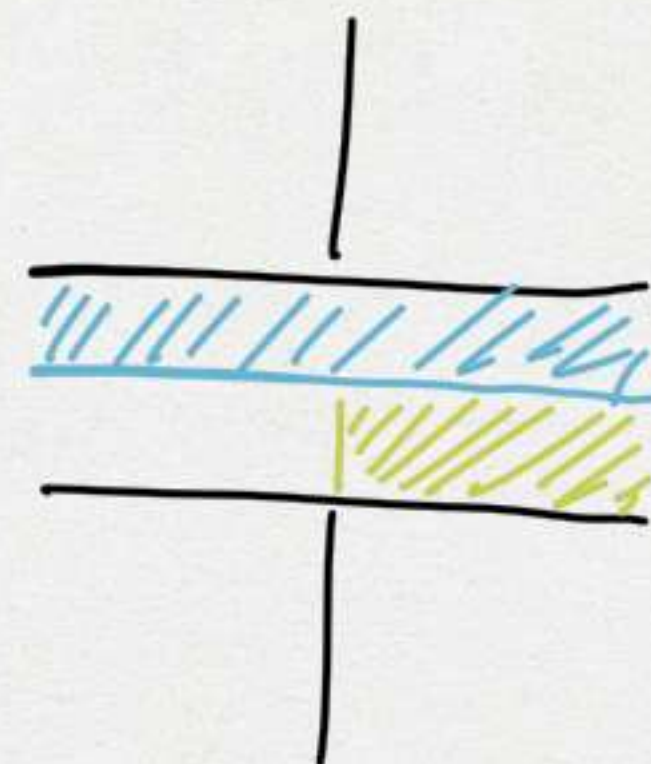


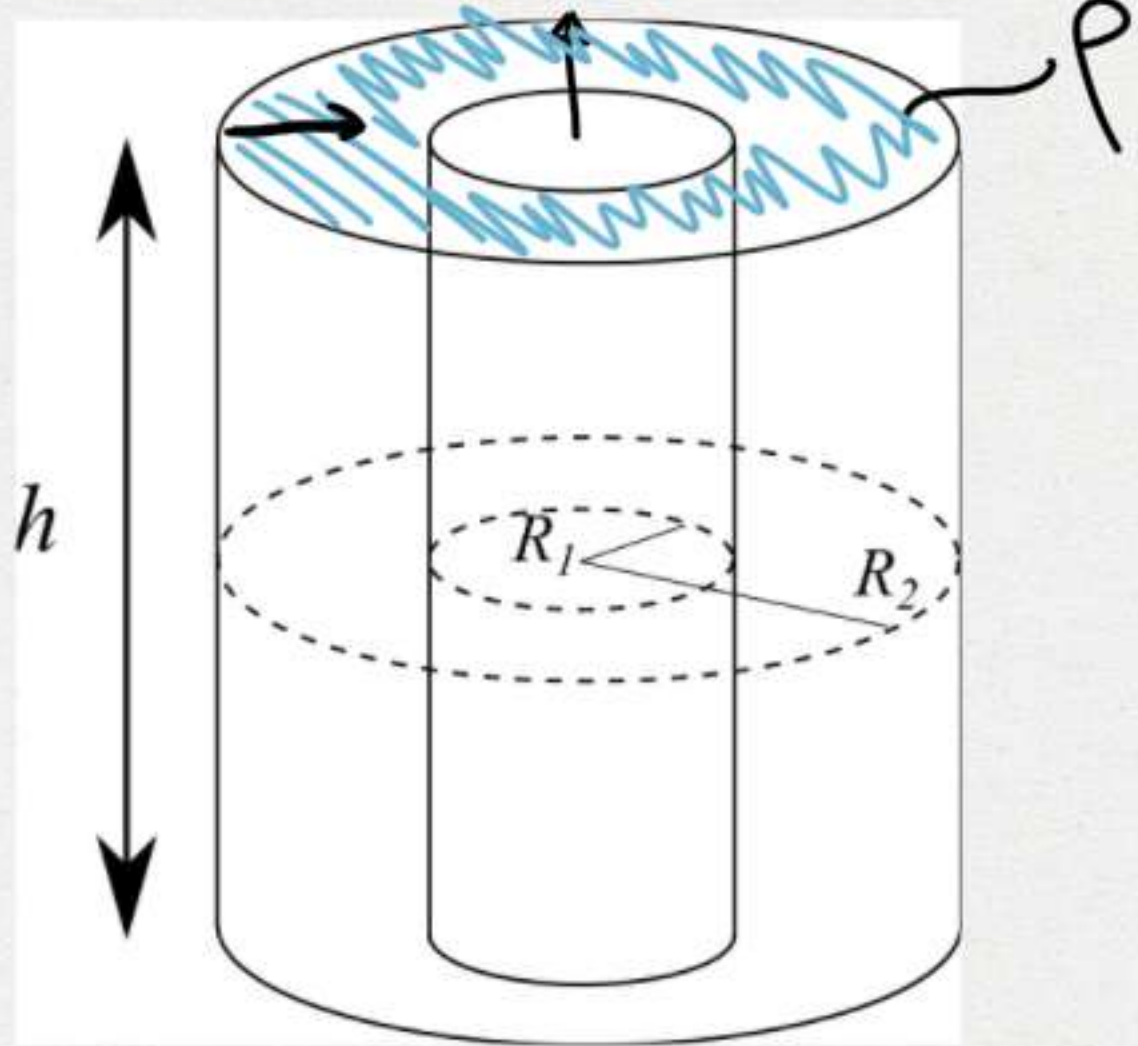
==



$$C_d = \epsilon_0 \frac{\rho}{3} b \frac{1}{h} K = \epsilon_0 \frac{\rho b K}{3h} \rightarrow Q_d = C_d \Delta V$$

$$C_v = \epsilon_0 \frac{2}{3} \rho b \frac{1}{h} = \epsilon_0 \frac{\rho b}{3h}$$

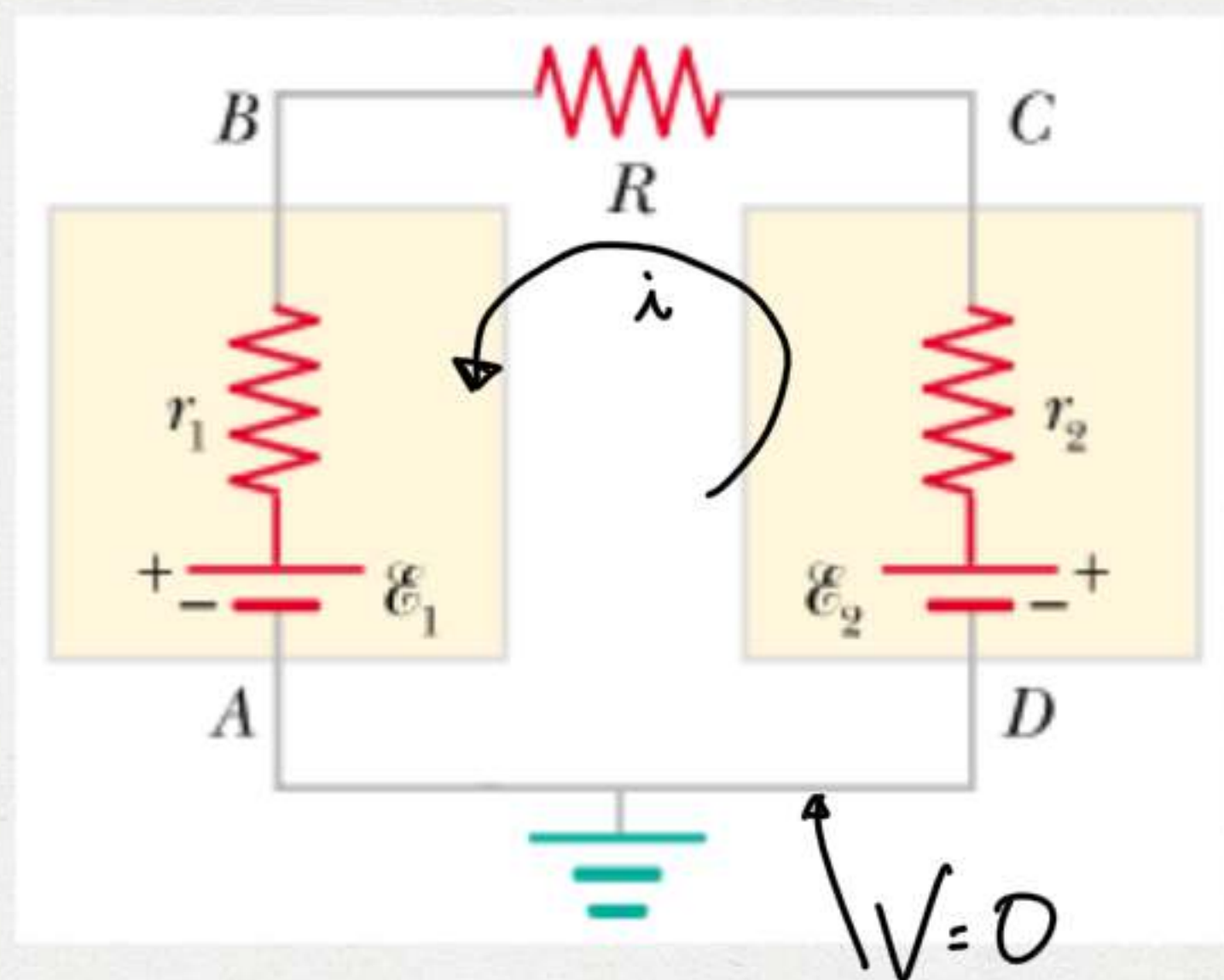




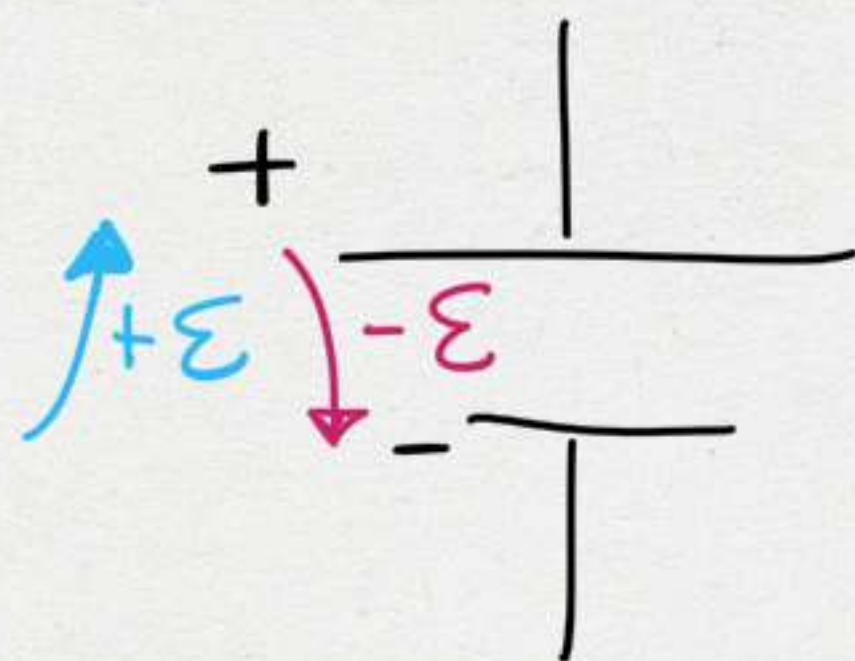
$$R = \int_0^h \frac{\rho dh'}{\Sigma(h)} = \rho \int_0^h \frac{dh'}{\Sigma(h)} = \rho \int_0^h \frac{dh'}{\pi R_2^2 - \pi R_1^2} =$$

$$= \frac{\rho h}{\pi (R_2^2 - R_1^2)}$$

$R_1, R_2, i = 500 \text{ mA}, E = 10 \frac{\text{V}}{\text{m}},$ quanto vale ρ ?

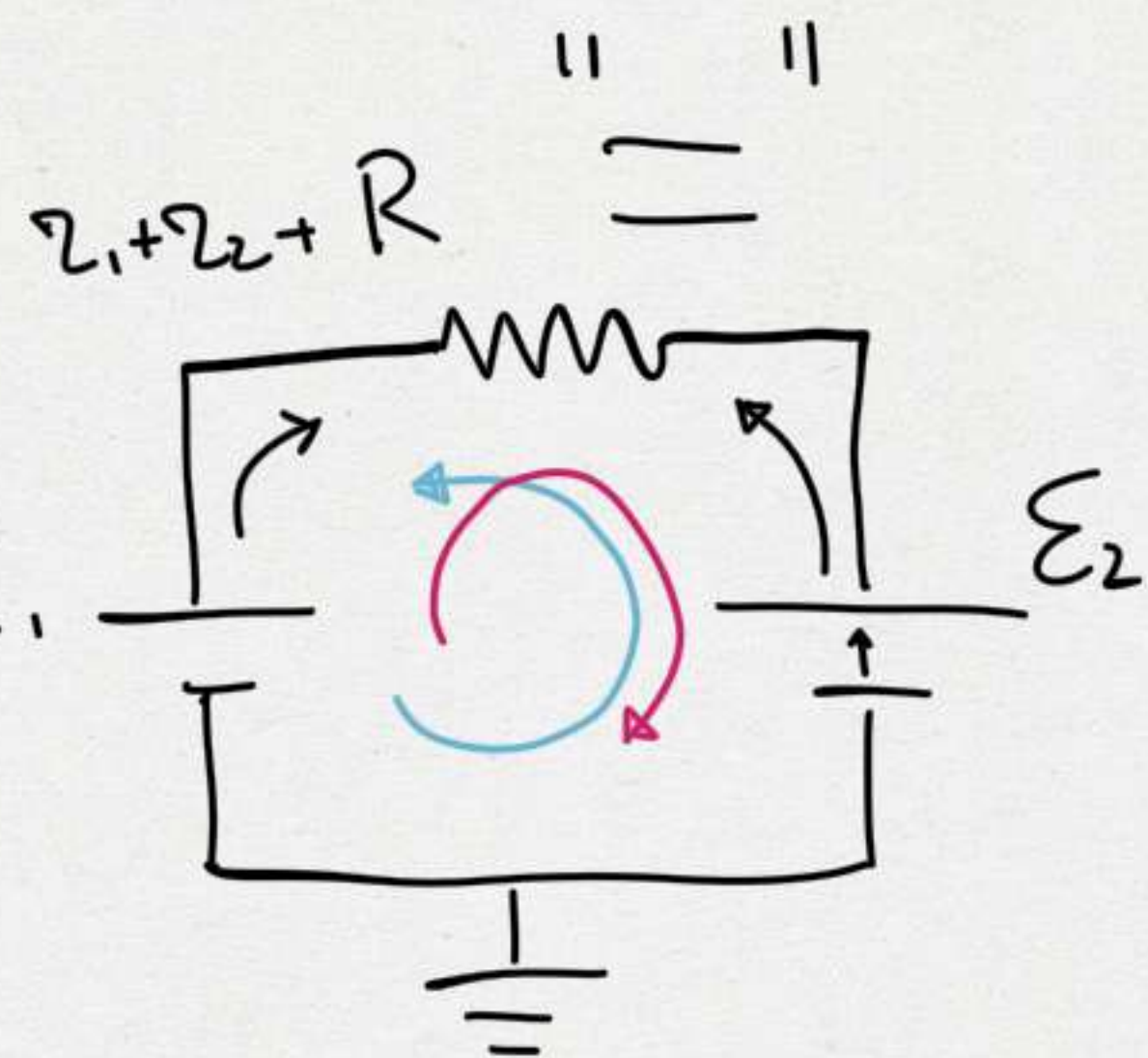


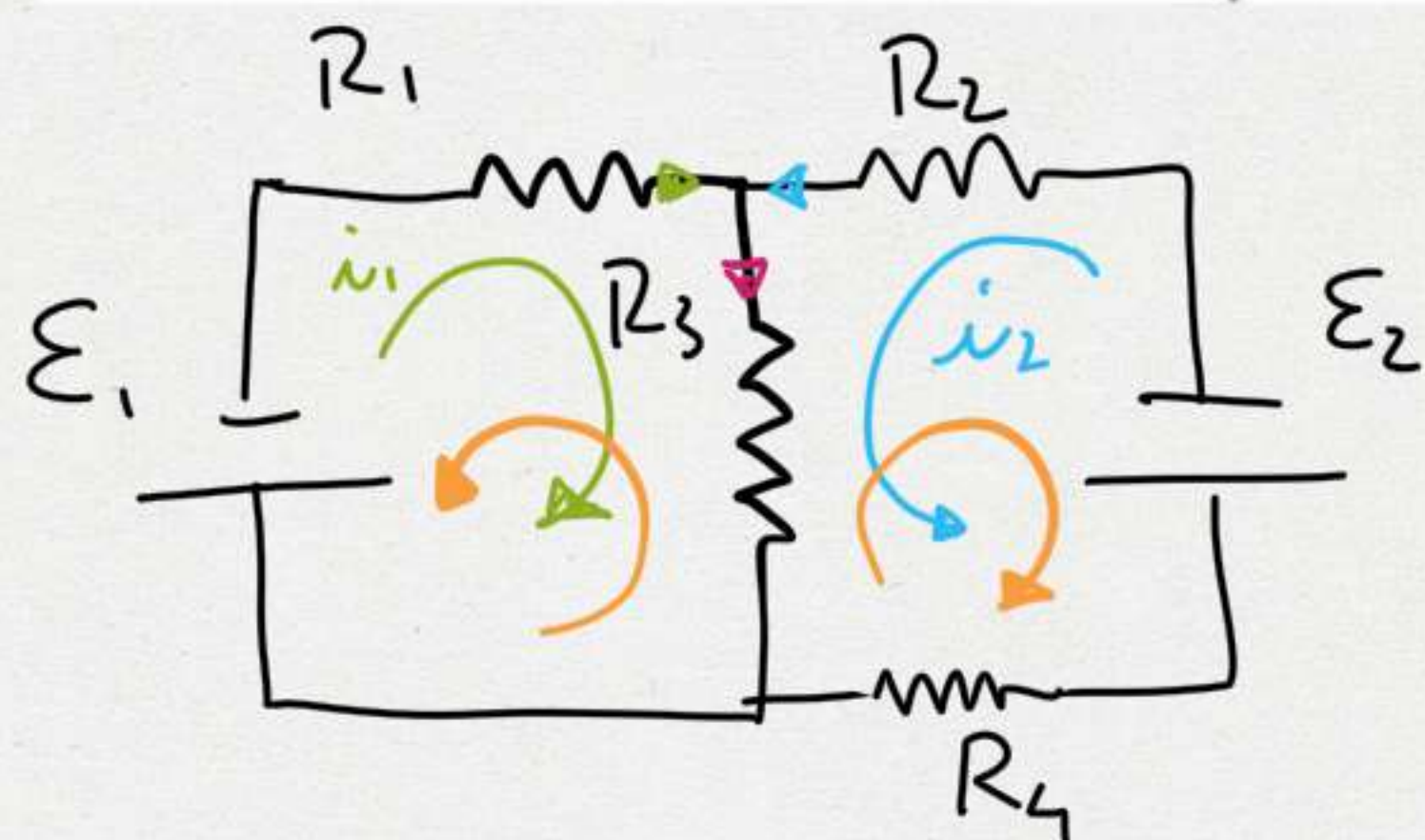
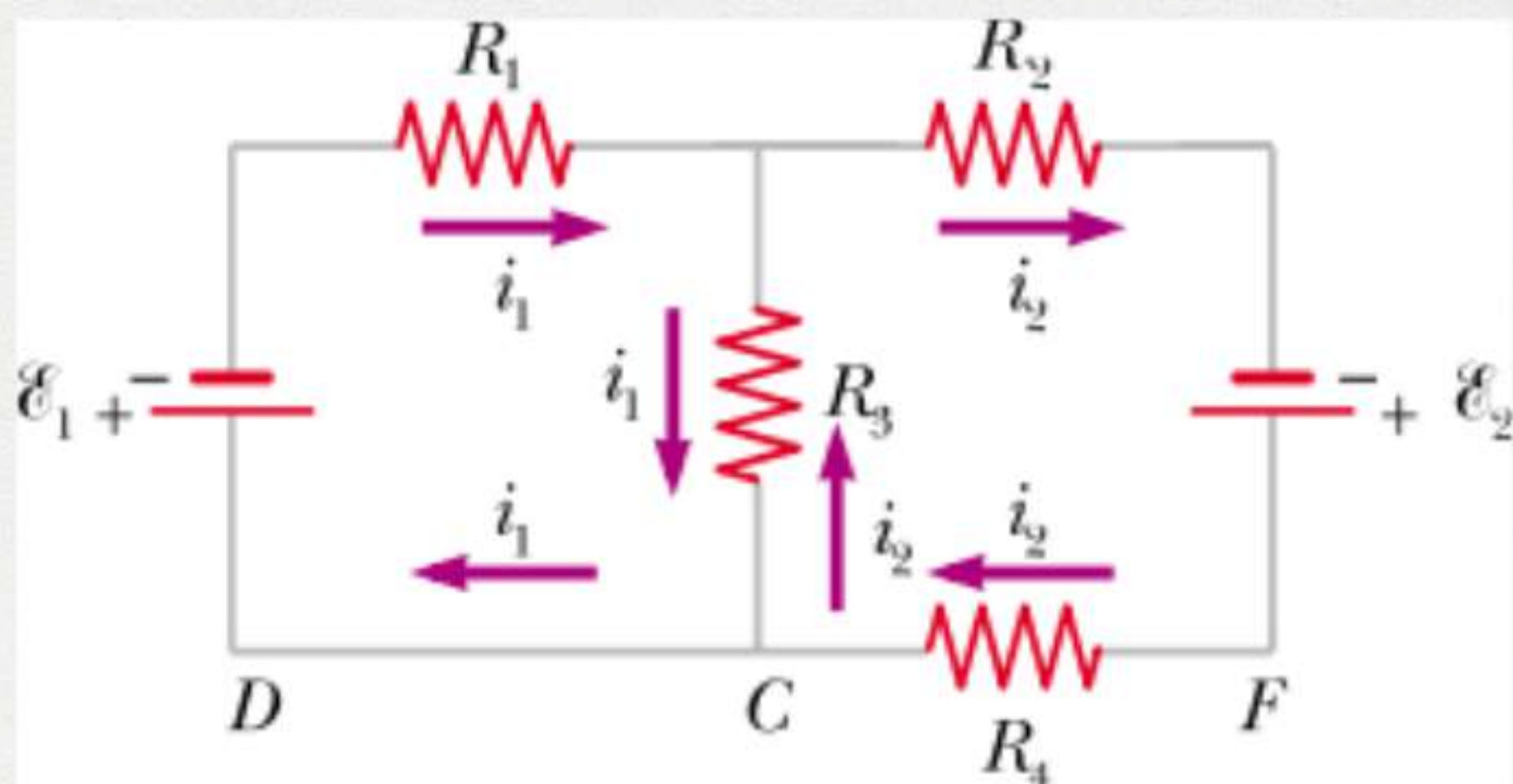
$$\mathcal{E}_1 = 50\text{ V}, \mathcal{E}_2 = 100\text{ V}, R = 50\ \Omega, r_1 = 20\ \Omega, r_2 = 30\ \Omega$$



$$\boxed{\mathcal{E}_2 - \mathcal{E}_1} = R_{eq} \dot{i} \Rightarrow \dot{i} = \frac{\boxed{\mathcal{E}_2 - \mathcal{E}_1}}{r_1 + r_2 + R} = \frac{50}{100} = 0.5\text{ A}$$

$$\boxed{\mathcal{E}_1 - \mathcal{E}_2} = R_{eq} \dot{i} \Rightarrow \dot{i} = \frac{\mathcal{E}_1 - \mathcal{E}_2}{r_1 + r_2 + R} = -0.5\text{ A}$$





$$\begin{cases} -\mathcal{E}_1 = R_1 i_1 + R_3 i_1 + R_3 i_2 \\ -\mathcal{E}_2 = R_2 i_2 + R_3 i_2 + R_3 i_1 + R_4 i_2 \\ = R_2 i_2 + R_3 i_3 + R_4 i_2, \quad i_3 = i_1 + i_2 \end{cases}$$

$$\mathcal{E}_1 = 18V, \quad \mathcal{E}_2 = 12V, \quad R_1 = 12\Omega, \quad R_2 = 2\Omega, \quad R_3 = 6\Omega \\ R_4 = 4\Omega$$

$$-18 = 12 i_1 + 6 i_1 + 6 i_2 = 18 i_1 + 6 i_2 \Rightarrow$$

$$i_1 = \frac{-18 - 6 i_2}{18} = -1 - \frac{1}{3} i_2$$

$$-12 = 12 i_2 + 6 i_1 = 12 i_2 - 6 - 2 i_2 = 10 i_2 - 6 \Rightarrow$$

$$-6 = 10 i_2 \Rightarrow i_2 = -\frac{6}{10} = -0.6A \Rightarrow$$

$$i_1 = -1 + 0.2 = -0.8A$$