

14/1/25

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Θέμα Α → μονάδες μέτρησης

αντίστασης $R \rightarrow \Omega$ (Ohm)

τάσης ή ΗΕΔ $E \rightarrow V$ (Volt)

έντασης ή δ.ρ.μ. $I \rightarrow A$ (Ampère)

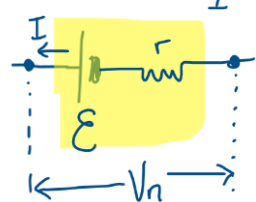
ισχύος $P \rightarrow W$ (Watt)

εργασία $W \rightarrow J$ (Joule)

Θέμα Β ίδιο θέμα με 2682

Τύποι

$$I = \frac{V}{R} \text{ ή } V = IR \text{ ή } R = \frac{V}{I}$$

$$V_n = E - I \cdot r$$


εργ. : $W = V \cdot I \cdot t$ $\xrightarrow[\text{αντίστ.}]{\text{νύρι}} W = E \cdot I \cdot t$

$$Q = I^2 \cdot R \cdot t = \frac{V^2}{R} t$$

ισχύς $P = \frac{W}{t} = V \cdot I$ $\xrightarrow[\text{αντίστ.}]{\text{νύρι}} P_{\text{μην}} = E \cdot I$

$$P = I^2 R = \frac{V^2}{R}$$

Συνδεδεμένοι

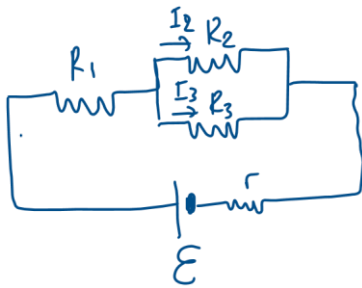
66 σειρά : $R_{02} = R_1 + R_2$ $\xrightarrow{I}$

παράλ. : $\frac{1}{R_{02}} = \frac{1}{R_1} + \frac{1}{R_2}$ $\xrightarrow{V}$

$$R_{02} = \frac{R_1 \cdot R_2}{R_1 + R_2}$$

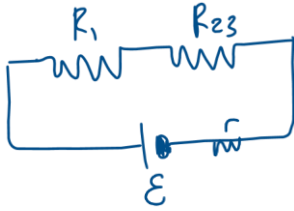
Θέμα Γ ή Δ : ίδιο

+ άσκηση με κύκλωμα

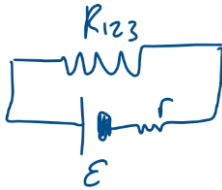


$$\begin{aligned} R_1 &= R \\ R_2 &= R \\ R_3 &= R \end{aligned}$$

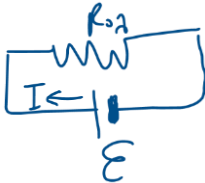
$$R_{23} = \frac{R_2 \cdot R_3}{R_2 + R_3} = \frac{R \cdot R}{R + R} = \frac{R^2}{2R} = \frac{R}{2}$$



$$R_{123} = R_1 + R_{23} = R + \frac{R}{2} = \frac{3R}{2}$$



$$R_{02} = R_{123} + r = \frac{3R}{2} + r$$



$$I = \frac{\mathcal{E}}{R_{02}}$$

$$V_n = \mathcal{E} - I \cdot r$$

$$P_1 = I^2 R_1$$

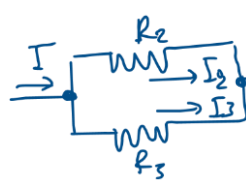
$$P_2 = I_2^2 R_2$$

$$P_3 = I_3^2 R_3$$

$$P_r = I^2 r$$

$$P_{\text{max}} = \mathcal{E} \cdot I$$

$$P_{\text{max}} = P_1 + P_2 + P_3 + P_r$$



$$\text{1. K.K.: } I = I_2 + I_3$$

$$V_2 = V_3$$

$$I_2 \cancel{R_2} = I_3 \cancel{R_3} \Rightarrow I_2 = I_3$$

$$\text{GIVEN: } R_2 = R_3 = R$$

$$\left. \begin{aligned} I &= I_2 + I_3 \\ I_2 &= I_3 \end{aligned} \right\} I_2 = I_3 = \frac{I}{2}$$