14.)

$R_b = 5\Omega \quad R_t = 10\Omega \quad$ a.) $R_{t2} = ? \quad P_{t2} = P_{t1}$

b.) $\frac{P_{t1}}{P_{ö1}}(\%) = ? \quad \frac{P_{t2}}{P_{ö2}}(\%) = ?$ c.) $P_{t\,max}$ $R_t = ?$

$\boxed{P = I^2 R} \quad \boxed{R_e = \sum R_i \text{ soros}} \quad \boxed{I = \frac{U}{R}}$

a.) $R_e = R_b + R_t$

$$I = \frac{\mathcal{E}}{R_e} = \frac{\mathcal{E}}{R_b + R_t} \qquad P_t = I^2 R_t = \frac{\mathcal{E}^2}{(R_b + R_t)^2} R_t = \frac{\mathcal{E}^2}{(5\Omega + R_t)^2} R_t \Rightarrow \underline{\underline{R_{t\,1,2}}}$$

b.) $$\frac{P_t}{P_ö} = \frac{\frac{\mathcal{E}^2 R_t}{(R_b + R_t)^2}}{\frac{\mathcal{E}^2 (R_b + R_t)}{(R_b + R_t)^2}} = \ldots < \begin{matrix} \% \\ \% \end{matrix}$$

c.) $$P_t = \frac{\mathcal{E}^2 R_t}{(R_b + R_t)^2} = \frac{\mathcal{E}^2 R_t}{(5\Omega + R_t)^2} \rightarrow \text{szélsőérték} \quad \frac{dP_t}{dR_t} = 0$$

$\underline{\underline{R_t}}$