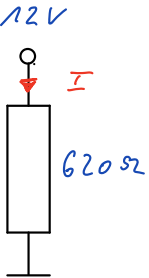

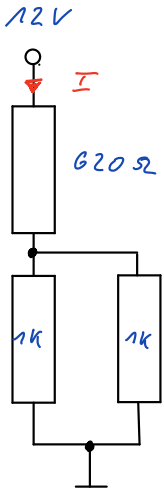

$I = \frac{12V}{1k} = 0,012\ A = 12\ mA$

$P = U \times I$

$I = \frac{P}{U} = \frac{0,25W}{12V} = 0,0208\ A$
$20,8\ mA$

$R = \frac{U}{I} = \frac{12V}{0,0208A} = 577\ \Omega$

E24 Reihe: 620 Ω

Leistung halbieren

$1/4\ W = 250\ mW = 0,25W$

$R_{ges_{parallel}} = \frac{1K}{2} = 500\ \Omega$

$R_{ges_{Reihe}} = 620\Omega + 500\ \Omega$
$= 1120\ \Omega$

$I = \frac{12\ V}{1120\ \Omega} = 0,010714A$
$= 10,71\ mA$

$P = U \times I$

$P = 12V \cdot 0,010714A$

$P = 0,12852W = 128,52\ mW$