$\hat{U}_{ss} = 20V$

$\hat{U}_s = 10V$

$U_{eff} = \hat{U}_s \cdot \frac{1}{\sqrt{2}}$

$U_{eff} = 10V \cdot 0,707$

$U_{eff} = \underline{7,07V}$

1) Strom ausrechnen

$I = \frac{U}{R}$

$I = \frac{7,07V}{600\Omega}$

$I = \underline{0,011A}$

2) Spannungsabfall am Widerstand Ri ausrechnen.

$U_{Ri} = \hat{U}_s - eff$

$U_{Ri} = 10V - 7,07V = \underline{2,93V}$

$U_{Ri} = \underline{2,93V}$

3) Ri ausrechnen

$R_i = \frac{U_{Ri}}{I}$

$R_i = \frac{2,93V}{0,011A} = \underline{266,36\Omega}$

$R_i = \underline{266,36\Omega}$