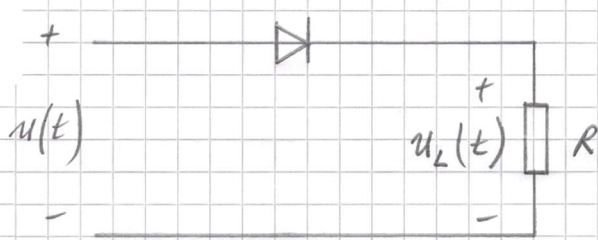


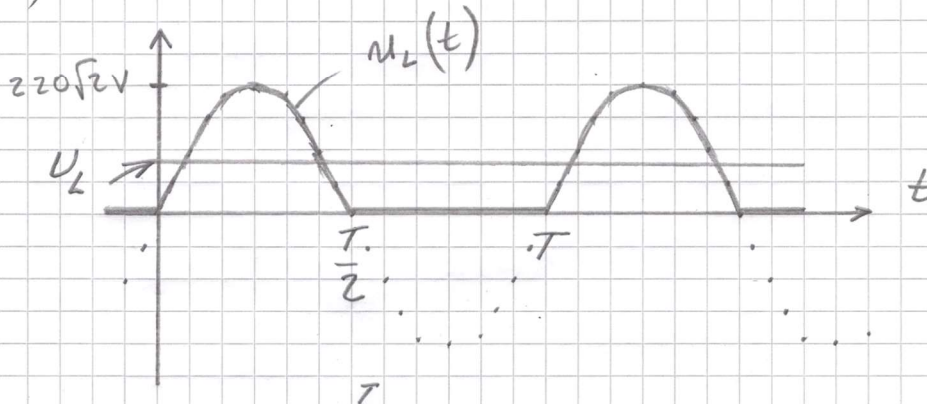
9.1



$$u(t) = 220\sqrt{2} \sin(\omega t) \text{ V}$$

DÄR $\omega = 2\pi f$, $f = 50 \text{ Hz}$
 $(T = 20 \text{ ms})$

a)



$$U_L = \frac{1}{T} \int_0^T u_L(t) dt =$$

$$= \frac{1}{T} \left(\int_0^{\frac{T}{2}} 220\sqrt{2} \sin(\omega t) dt + \int_{\frac{T}{2}}^T 0 dt \right) =$$

$$= \frac{1}{T} = \frac{2\pi}{\omega} \Big| = \frac{2\pi}{2\pi} \cdot 220\sqrt{2} \left[\frac{-\cos(\omega t)}{\omega} \right]_0^{\frac{\pi}{\omega}} =$$

$$= 49,5 [-\cos \pi + \cos 0] = 99 \text{ V}$$

b) GRAFEN GER $U_{\text{BRUM}}(\text{TOPPTILLTOPP}) = 220\sqrt{2} \text{ V}$

