

$$-\frac{\dot{i}}{\gamma} = \frac{di}{dt} \quad | \cdot dt \quad | : i$$

$$-\frac{dt}{\gamma} = \frac{di}{i} \quad | \int$$

$$\int -\frac{dt}{\gamma} = \int \frac{di}{i}$$

$$\ln(i) = -\frac{t}{\gamma} + \ln(k)$$

$$i = e^{-\frac{t}{\gamma} + \ln(k)} = e^{-\frac{t}{\gamma}} \cdot e^{\ln(k)}$$

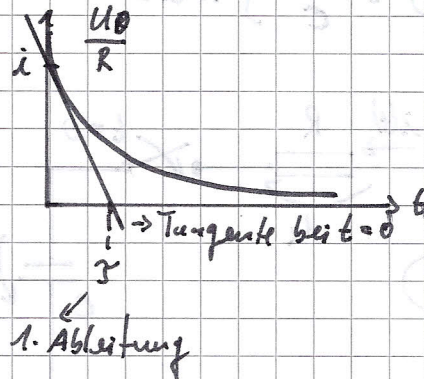
$$i = k \cdot e^{-\frac{t}{\gamma}} \rightarrow \text{Anfangsbedingung}$$

$$i(0) = \frac{U_0}{R}$$

$$i(0) = \frac{U_0}{R} = k \cdot e^{-\frac{0}{\gamma}} = k \cdot 1$$

$$\frac{U_0}{R} = k$$

$$i(t) = \frac{U_0}{R} \cdot e^{-\frac{t}{\gamma}} \quad (\Rightarrow)$$



$$i(t) = \frac{U_0}{R} \cdot e^{-\frac{t}{\gamma}}$$