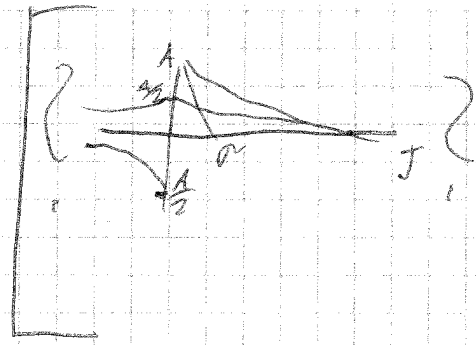
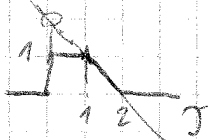




1) gerade  
ungerade Teil von  $Ae^{-\alpha T} \varepsilon(T) \quad \alpha > 0$   
Berechnen & zeichnen

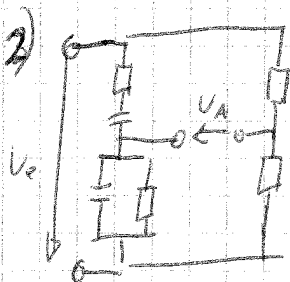


2) Laplace-Transf. von



$$\left[ \frac{? \cdot s + (2s-1)e^{-s} + (1-2s)e^{-2s}}{s^2} \right] \quad \frac{1}{s} - \frac{e^{-s}}{s^2} + \frac{e^{-2s}}{s^2}$$

$$x(t) = \varepsilon(t) - (t-1)\varepsilon(t-1) + (t-2)\varepsilon(t-2)$$



$G(s) = ?$  incl. Bezugswerte f V

$T_D = RC$

Frequenz & OK = ?

3) LTI

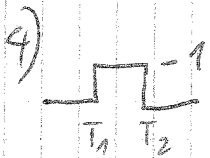
$$G(s) = \frac{1-s}{1+s}$$

Diff-Gl = ?

Lösungen für  $T > 0 = ?$

bei  $U(s) = 2s$

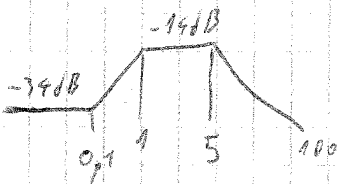
$Y(0+) = 2$



$$Y(t) = G(s) \frac{e^{-j\omega T_1} - e^{-j\omega T_2}}{j\omega}$$

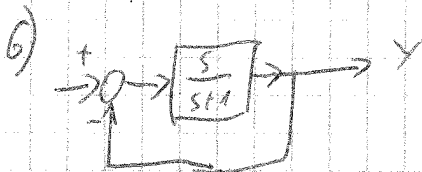
$Y(j\omega) = ?$

5)



Minimal (winkel) syst.

$$G(s) = ? = \frac{s+0.1}{(s+1)(s+5)}$$

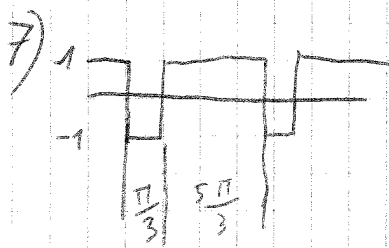


Ausgangssig in der Form

$$Y_{st}(s) = a_y \cos(T + \varphi_y)$$

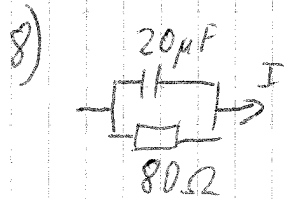
wenn

$$U(s) = a_u \cos(T)$$



Durchschnittswert  
Eff. der Grundschwingung

$$\bar{x} = \frac{1}{3}$$

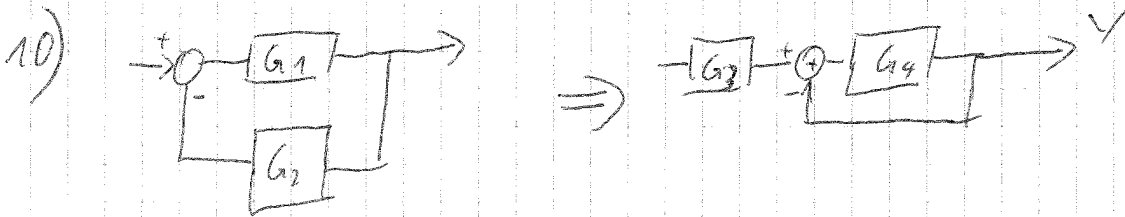


$$i = 2A + 6A \cos(\omega t) + 4A \cos(3\omega t - 45^\circ)$$

$$\omega = 2\pi f \quad f = 50 \text{ Hz}$$

$P_R = ?$  (artgen. Wirkleistung)

9) 1.



Äquivalenz herstellen

$$G_3 = ?$$

$$G_4 = ?$$

$$\begin{cases} G_3 = \frac{1}{G_2} \\ G_4 = G_2 G_1 \end{cases}$$