

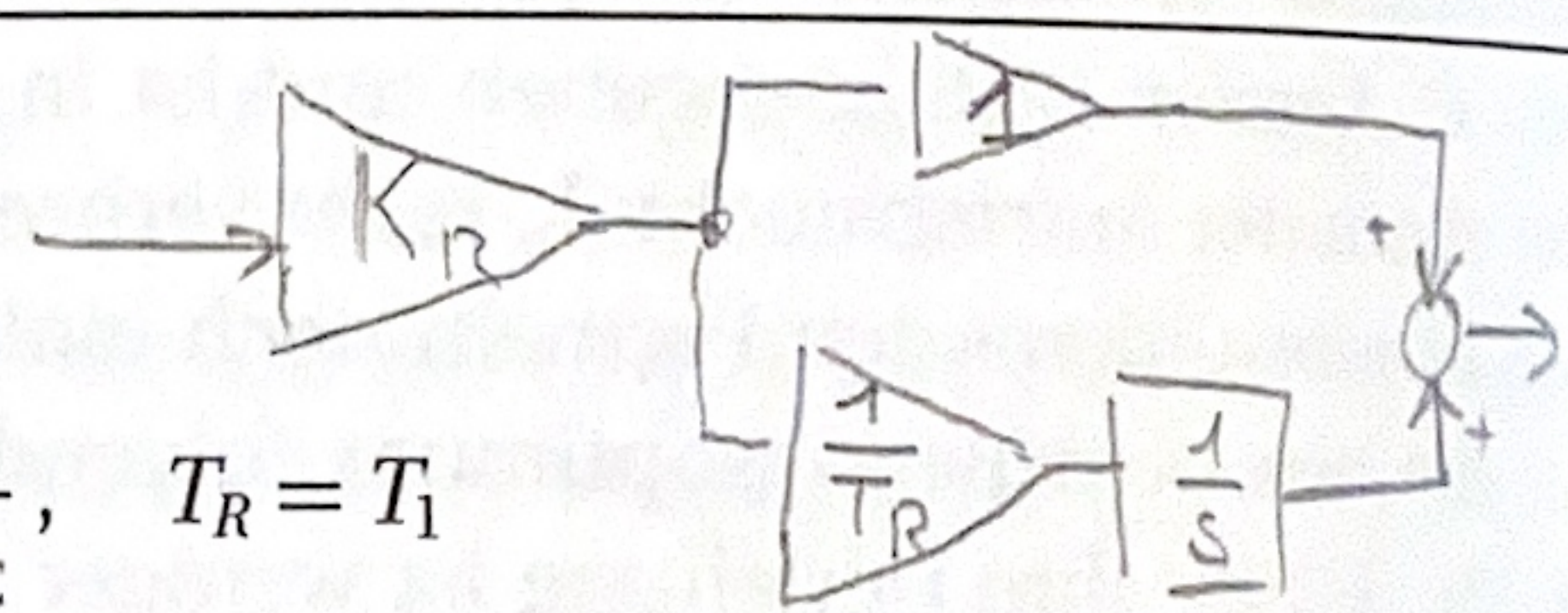
Strecke $F_o(s)$	Regler $G_K(s)$	Einstellregeln
$\frac{1}{a_0 + a_1 s + a_2 s^2 + \dots}$	PI $\frac{r_0 + r_1 s}{2s}$	$r_0 = a_0 \frac{a_1^2 - a_0 a_2}{a_1 a_2 - a_0 a_3}, \quad r_1 = a_1 \frac{a_1^2 - a_0 a_2}{a_1 a_2 - a_0 a_3} - a_0$
$\frac{1}{a_0 + a_1 s + a_2 s^2 + \dots}$	PID $\frac{r_0 + r_1 s + r_2 s^2}{2s}$	$r_0 = \frac{1}{D} \begin{vmatrix} a_0^2 & -a_0 & 0 \\ -a_1^2 + 2a_0 a_2 & -a_2 & a_1 \\ a_2^2 + 2a_0 a_4 - 2a_1 a_3 & -a_4 & a_3 \end{vmatrix}$ $r_1 = \frac{1}{D} \begin{vmatrix} a_1 & a_0^2 & 0 \\ a_3 & -a_1^2 + 2a_0 a_2 & a_1 \\ a_5 & a_2^2 + 2a_0 a_4 - 2a_1 a_3 & a_3 \end{vmatrix}$ $r_2 = \frac{1}{D} \begin{vmatrix} a_1 & -a_0 & a_0^2 \\ a_3 & -a_2 & -a_1^2 + 2a_0 a_2 \\ a_5 & -a_4 & a_2^2 + 2a_0 a_4 - 2a_1 a_3 \end{vmatrix}$ $D = \begin{vmatrix} a_1 & -a_0 & 0 \\ a_3 & -a_2 & a_1 \\ a_5 & -a_4 & a_3 \end{vmatrix}$
$\frac{K_S}{\prod_{v=1}^n (1 + T_v s)}$ $T_1 \gg T_\Sigma = \sum_{v=2}^n T_v$	PI $K_R \frac{1 + T_R s}{s}$	$K_R = \frac{1}{2K_S T_\Sigma}, \quad T_R = T_1$ 
$\frac{K_S}{\prod_{v=1}^n (1 + T_v s)}$ $T_1, T_2 \gg T_\Sigma = \sum_{v=3}^n T_v$ 2 große Zeitkonstanten	PI $K_R \frac{1 + T_R s}{s}$	$K_R = \frac{1}{2K_S} \frac{T_1^2 + T_1 T_2 + T_2^2}{(T_1 + T_2) T_1 T_2}$ $T_R = \frac{(T_1^2 + T_2^2)(T_1 + T_2)}{T_1^2 + T_1 T_2 + T_2^2}$
	PID $K_R \frac{(1 + T_{R1} s)(1 + T_{R2} s)}{s}$	$K_R = \frac{1}{2K_S T_\Sigma}, \quad T_{R1} = T_1, \quad T_{R2} = T_2$

Tabelle 6-3: Einstellregeln zum Betragsoptimum