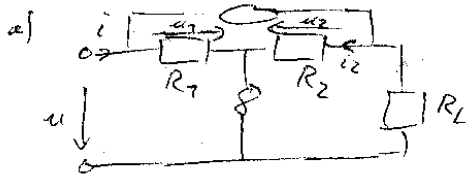
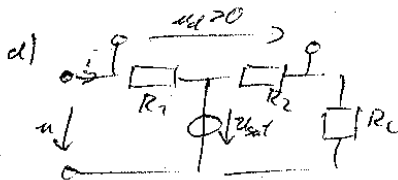


Aufgabe 72)



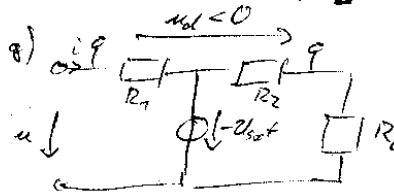
b) $u_1 = u_2 \Rightarrow i_2 = \frac{u_2}{R_2} = \frac{u_1}{R_2} = \frac{R_1}{R_2} i$
 $\Rightarrow u = -R_2 i_2 = -R_2 \frac{R_1}{R_2} i \Rightarrow i = -\frac{R_2 u}{R_1 R_2}$

c) $u_L = 0$
 $| -u_2 + u | = | u - u_1 | = | -R_2 \frac{R_1}{R_2} i + u |$
 $= | u - R_1 i | = | u + \frac{R_2}{R_1} u | \leq u_{sat}$
 $-\frac{R_2 u_{sat}}{R_2 + R_1} \leq u \leq \frac{R_2 u_{sat}}{R_2 + R_1}$



e) $u = R_1 i + u_{sat} \Rightarrow i = \frac{u - u_{sat}}{R_1}$

f) $u_L = u - u_{sat} + \frac{R_2}{R_2 + R_L} u_{sat} = u - \frac{R_L}{R_2 + R_L} u_{sat} > 0 \Rightarrow u > \frac{R_L}{R_2 + R_L} u_{sat}$



$u = R_1 i - u_{sat} \Rightarrow i = \frac{u + u_{sat}}{R_1}$

$u_L = u + u_{sat} - u_{sat} \frac{R_2}{R_2 + R_L} = u + \frac{R_L}{R_2 + R_L} u_{sat} < 0$

$\Rightarrow u < -\frac{R_L}{R_2 + R_L} u_{sat}$

h)

