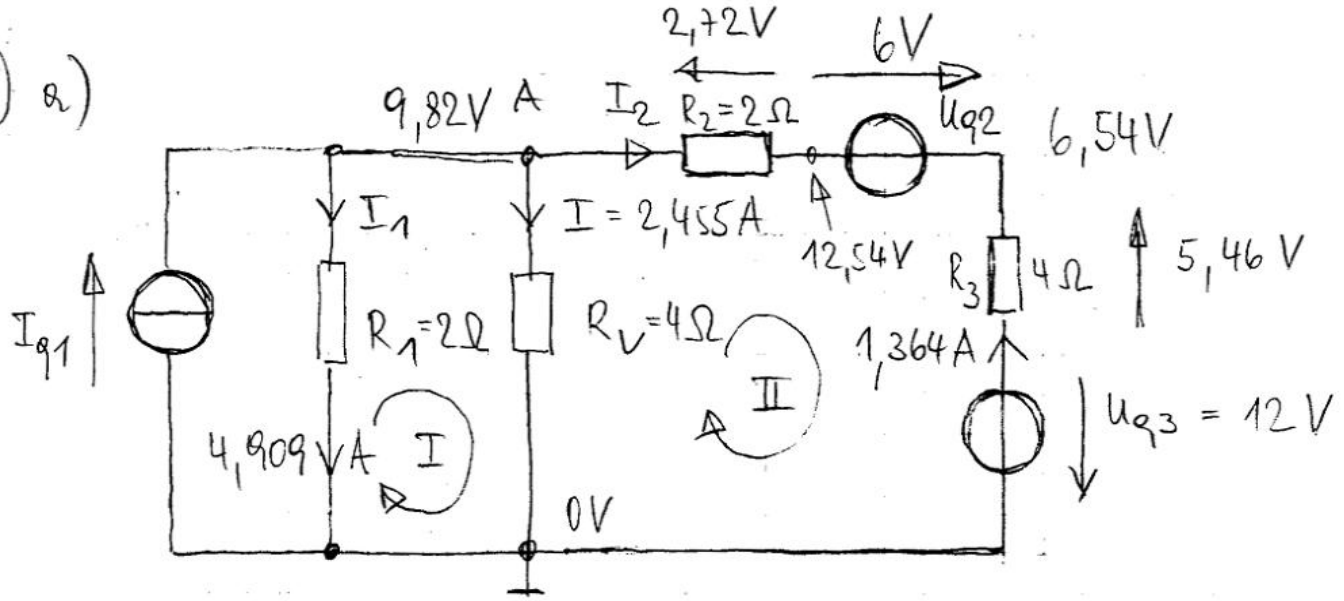
(5) a)



3 unbekannte Ströme : 1 Knoten , 2 Maschen

Knoten A : $I_1 + I_2 + I = I_{q1}$

Masche I : $-R_1 I_1 + R_V I = \cancel{0}$

Masche II : $R_2 I_2 + U_{q2} + R_3 I_2 + U_{q3} - R_V I = 0$

I_1	I_2	I	r. S.	
1	1	1	I_{q1}	
$-R_1$	$\cancel{0}$	R_V	$\cancel{0}$	
$\cancel{0}$	R_2+R_3	$-R_V$	$-U_{q2}-U_{q3}$	
1	1	1	6	$\cdot 2$ } +
-2	$\cancel{0}$	4	$\cancel{0}$	
$\cancel{0}$	6	-4	-18	
1	1	1	6	
$\cancel{0}$	2	6	12	$\cdot(-3)$ } +
$\cancel{0}$	6	-4	-18	
1	1	1	6	$\Rightarrow I_1 = 4,909\ A$
$\cancel{0}$	2	6	12	$\Rightarrow I_2 = -1,364\ A$
$\cancel{0}$	$\cancel{0}$	-22	-54	$\Rightarrow I = \frac{54}{22} = 2,455\ A$