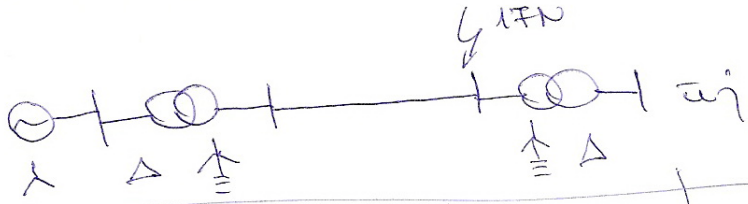
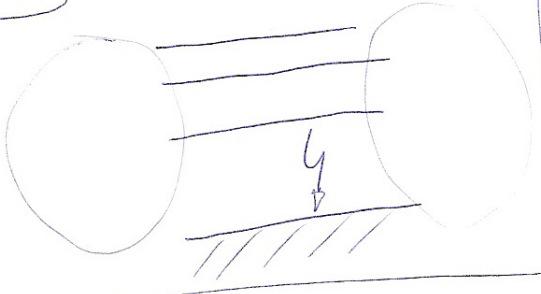


I



II



$$X_1^g = 0,15$$

$$X_2^g = 0,1$$

$$u_g = 1$$

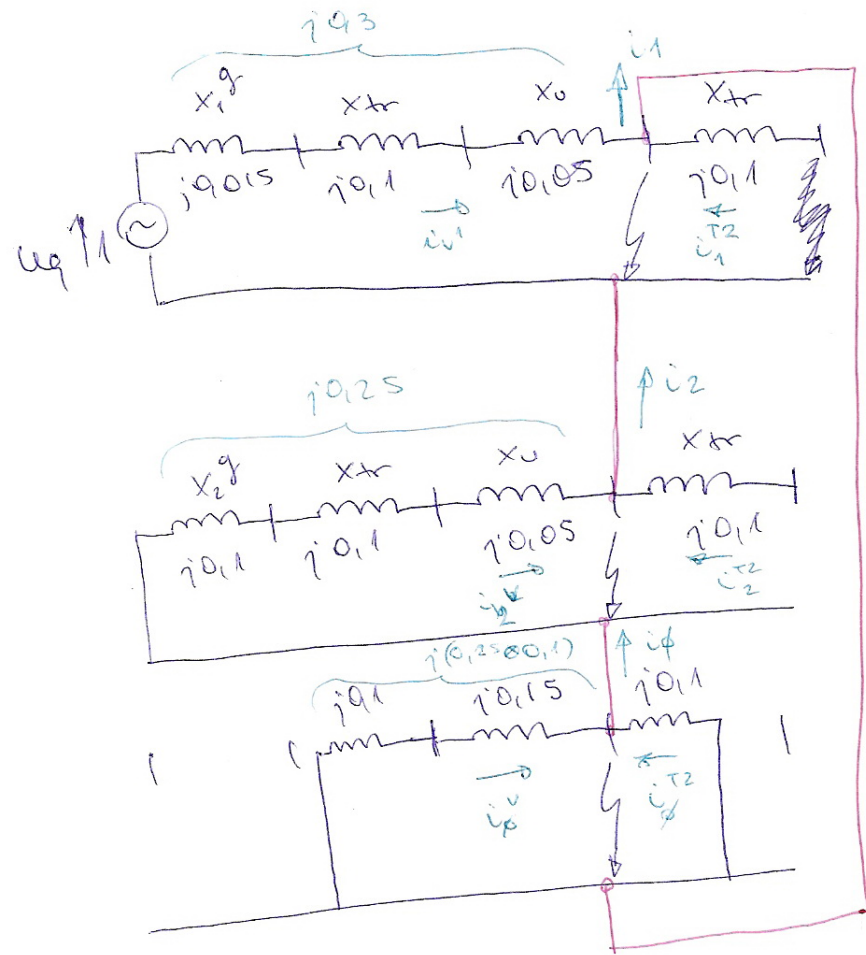
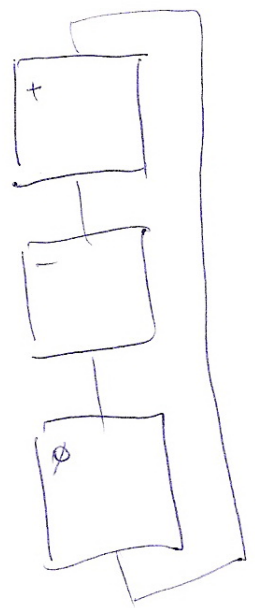
$$X_{tr_{1,2,0}} = 0,1$$

$$X_{tr_{1,2,0}} = 0,1$$

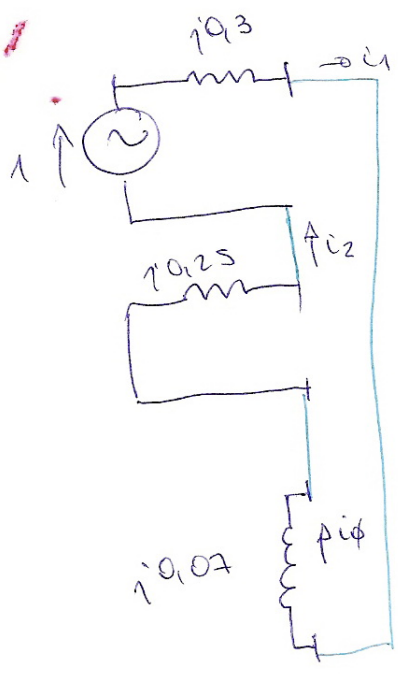
$$X_1 - X_2 = 0,05$$

$$X_0 \approx 3X_1$$

$i_{a,b,c}^v = ?$
 $i_{a,b,c}^{T2} = ?$
 $i_z = ?$



Bauch paradoxen



$$i_1 = i_2 = i_\phi \quad 17U!$$

$$i_1 = \frac{1}{j(0.3 + 0.25 + 0.07)} = -j1.61$$

$$i_2 = i_a = i_\phi + i_1 + i_2 = 3i_1 = -j4.83$$

$$i_b = i_\phi + a^2 i_1 + a i_2 = i_\phi (1 + a^2 + a) = \phi$$

$$i_c = \phi$$

$$i_1^u = i_1$$

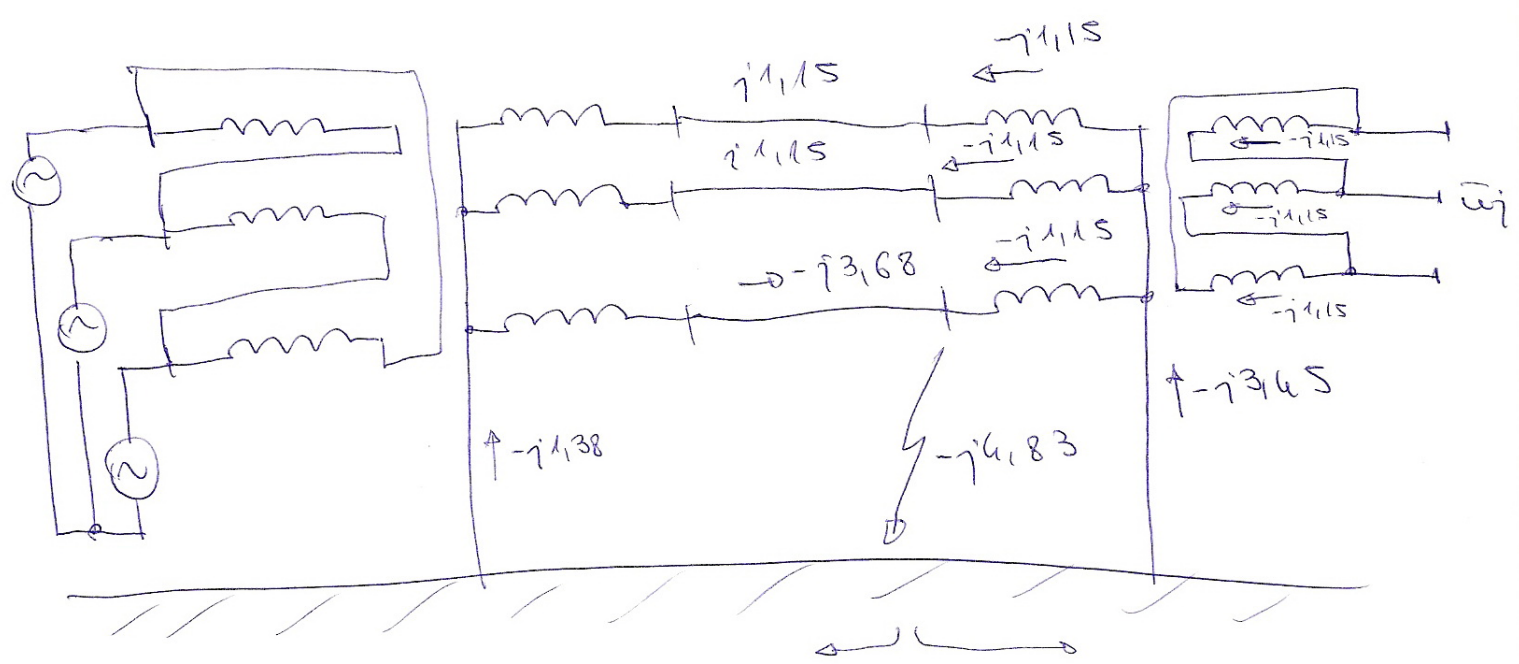
$$i_2^u = i_2$$

$$i_0^u = i_\phi \frac{j0.1}{j(0.1 + 0.25)} = -j0.46$$

$$i_a^u = i_0^u + i_1^u + i_2^u = -j3.68$$

$$i_b^u = i_0^u + a^2 i_1^u + a i_2^u = -j0.46 + j1.161 = j1.115$$

$$i_c^u = j1.115$$



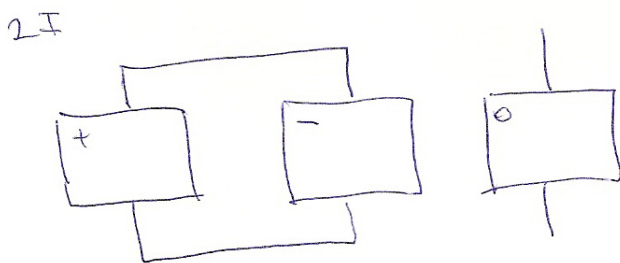
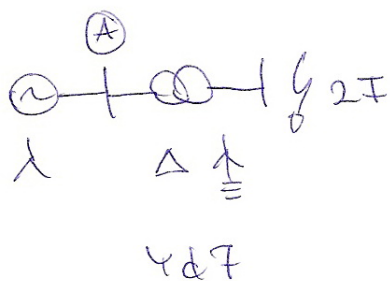
$$i_1^{T2} = i_2^{T2} = \phi$$

$$i_0^{T2} = i_\phi - i_0^u = -j1.115$$

$$i_a = i_\phi = -j1.115$$

$$i_b = i_\phi = -j1.115$$

$$i_c = -j1.115$$



$$u_A^g = 1$$

$$x_1^g = 0.2$$

$$x_2^g = 0.1$$

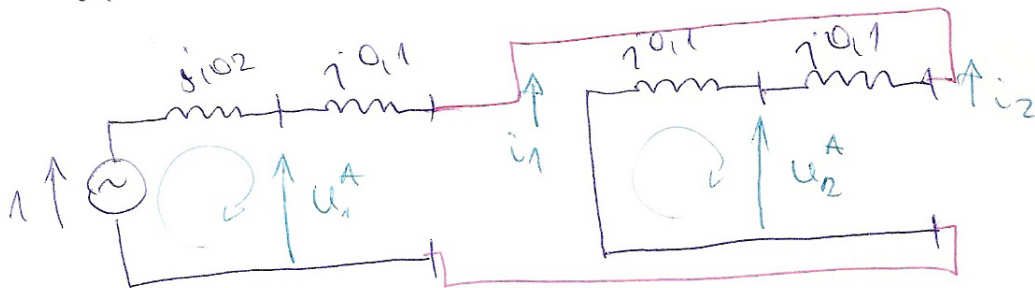
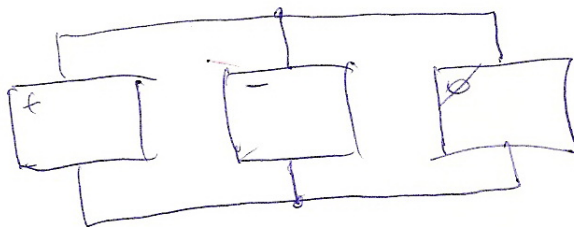
$$x_{1,2,10}^T = 0.1$$

$$i_2^{2I} = ?$$

$$i_{a,b,c}^g = ?$$

$$u_{a,b,c}^A = ?$$

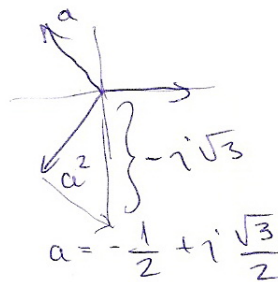
2FN



$$i_1 = \frac{1}{j0.5} = -j2 = -i_2$$

$$i_2^{2I} = |i_b| = |i_c| = |i_a + a^2 i_1 + a i_2| =$$

$$= |i_1(a^2 - a)| = 2\sqrt{3}$$



$$a = -\frac{1}{2} + j\frac{\sqrt{3}}{2}$$

$$a^2 = -\frac{1}{2} - j\frac{\sqrt{3}}{2}$$

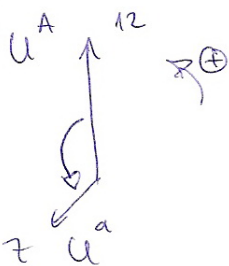
$$i_1^g = i_1$$

$$i_2^g = i_2$$

$$i_1^{g*} = i_1^g e^{j150^\circ}$$

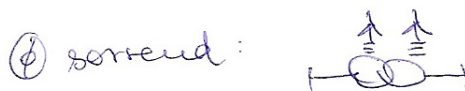
$$i_2^{g*} = i_2^g e^{-j150^\circ}$$

Yd7:



⊕ sorrend: Y → d +150°

⊖ sorrend: Y → d -150°



Yy0

Yy6

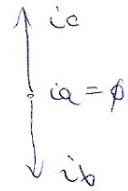
$$i_c^g = i_\phi^g + a i_1^g + a^2 i_2^g = \phi - j2e^{j150^\circ} - j2e^{-j150^\circ} = 2$$

$$i_b^g = i_\phi^g + a^2 i_1^g + a i_2^g = \phi - j2e^{j150^\circ} e^{-j120^\circ} + j2e^{-j150^\circ} e^{j120^\circ} = 2$$

$$i_c^g = i_\phi^g + a i_1^g + a^2 i_2^g = \phi - j2e^{j150^\circ} e^{j120^\circ} + j2e^{-j150^\circ} e^{-j120^\circ} = 2$$



lebaleleg:



$$\frac{U_1}{I_1} = \frac{U_1^*}{I_1^*} \rightarrow \text{impedanciák}$$

nem fordultak

$$U_1^A = U_1^g - i_1 j X_1^g = 1 - (-j2) j 0,2 = 0,6 \rightarrow U_1^{**} = 0,6 e^{j150^\circ}$$

$$U_2^A = \phi - i_2 j X_2^g = -j2 j 0,1 = 0,2 \rightarrow U_2^{**} = 0,2 e^{-j150^\circ}$$

$$U_\phi^A = \phi$$

$$\left. \begin{aligned} U_a^A &= -0,69 + j0,2 \\ U_b^A &= 0,69 + j0,2 \\ U_c^A &= -j0,4 \end{aligned} \right\} \Sigma = \phi \text{ mert nem földzárthat}$$

$$i_\phi = \frac{1}{3} (i_a + i_b + i_c)$$

