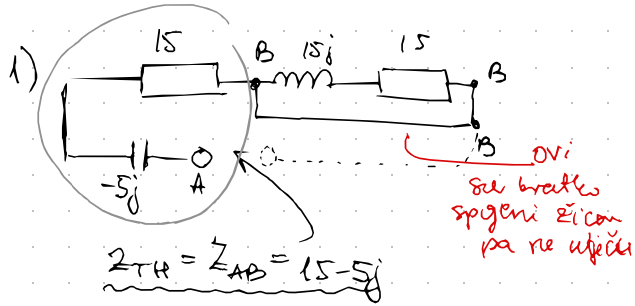
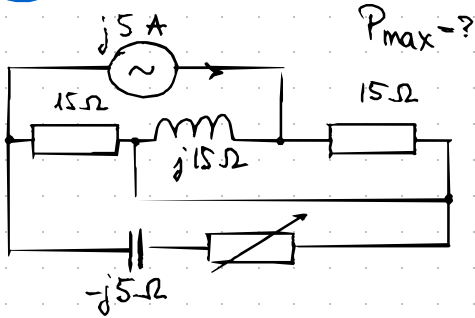
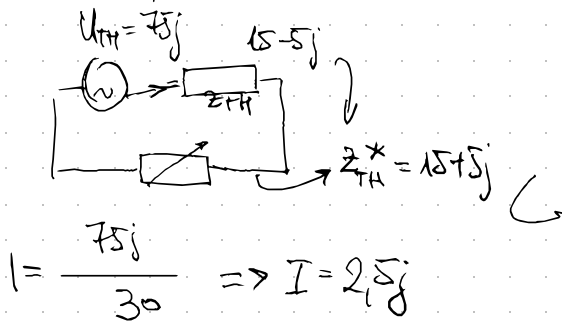


# THEVENIN ZADACI

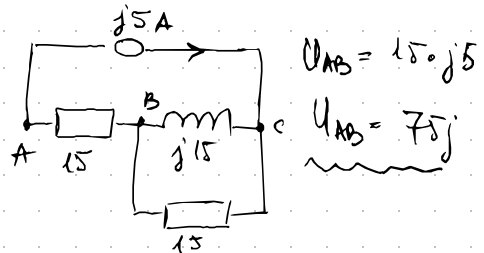
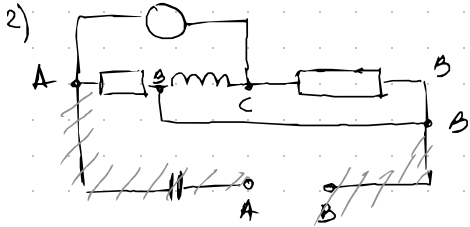
① LIR 19./20. 14.)



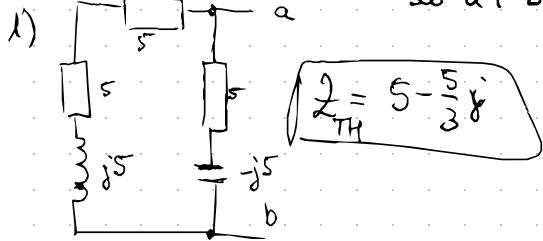
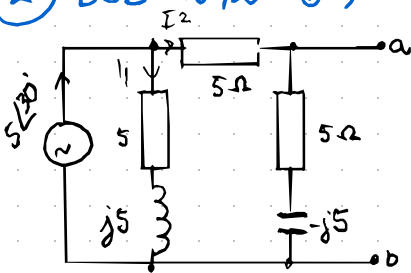
3) Nacrtajmo skemu



$$P_{max} = (2.5j)^2 \cdot 15 = \boxed{93.75 \text{ W}}$$



② DOD 19./20. 6.) Parametri radnog izvora Theveninovog izvora su a i b

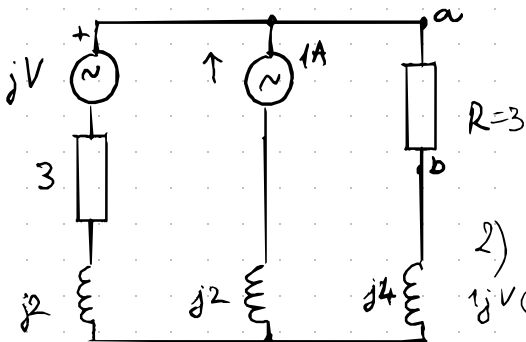


2)  $U_{TH} = U_{AB} \rightarrow I_2$  - tagrama

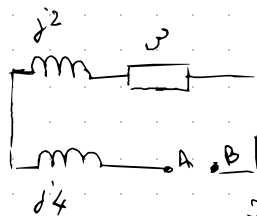
$$I_2 = 5 \angle 30^\circ \frac{5 + j5}{15 + j5 - j5} = \frac{5\sqrt{2}}{3} \angle 75^\circ$$

$$U_{TH} = \frac{50}{3} \angle 30^\circ$$

③ LVIR 20./21. 14.)  $|U_3| = ?$



1)  $Z_{TH}$

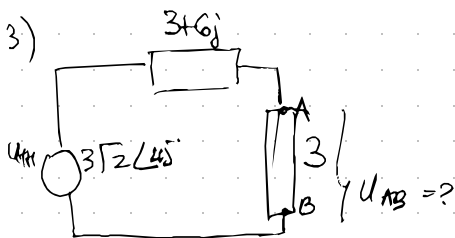


$$Z_{TH} = 3 + 6j$$

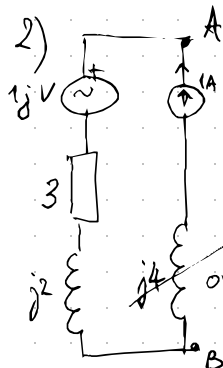
MILLMAN - DUVIE GRANE

$$U_{TH} = \frac{1 + \frac{j2}{3+j2}}{\frac{1}{3+j2}}$$

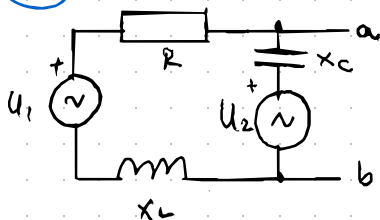
$$U_{TH} = 3\sqrt{2} \angle 45^\circ$$



$$U_{AB} = I \cdot 3 = \frac{3\sqrt{2} \angle 45^\circ}{3+6j+3} \cdot 3 = \frac{3}{2} V$$



④ 21 19./20. 3.)  $U_{ab} = ?$



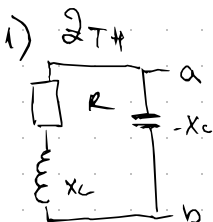
$$U_1 = j10$$

$$U_2 = -10V$$

$$R = 30 \Omega$$

$$X_L = j30 \Omega$$

$$X_C = -j60 \Omega$$



1)  $Z_{TH}$

$$Z_{TH} = \left[ \frac{1}{R+X_L} + \frac{1}{-X_C} \right]^{-1}$$

$$Z_{TH} = 60 \Omega$$

$$2) U_{AB} = \frac{\frac{U_1}{R+X_L} + \frac{U_2}{-X_C}}{R+X_L+X_C} = \frac{\frac{j10}{30+j30} + \frac{-10}{-60j}}{30+j30-j60}$$

$$U_{AB} = 10V$$