

Ponovo rešavam četvrti domaći, mislim da to treba postupnije,

\underline{Z}_{12} predstavlja ukupnu impedansu dve impedancije \underline{Z}_1 i \underline{Z}_2 koje su inače paralelno vezane

$$\underline{Z}_1 = 5 + j20, \underline{Z}_2 = 30 \Omega$$

$$\frac{\underline{Z}_1 \cdot \underline{Z}_2}{\underline{Z}_1 + \underline{Z}_2} = \frac{(5 + j20)30}{5 + j20 + 30} = \frac{150 + j600}{35 + j20} = \frac{150(1 + j4)}{5(6 + j4)} = \frac{30(1 + j4)}{6 + j4} \cdot \frac{(6 - j4)}{(6 - j4)}$$

$$\frac{30(6 - j4 + j24 + 16)}{36 + 16} = \frac{30(22 + j20)}{52} = \frac{60(11 + j10)}{52} =$$

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$$= 1,15(11 + j10) = 12,65 + j11,5$$