Ηλεκτρικά Κυκλώματα Ι

Διάλεξη 21-23

Α. Δροσόπουλος

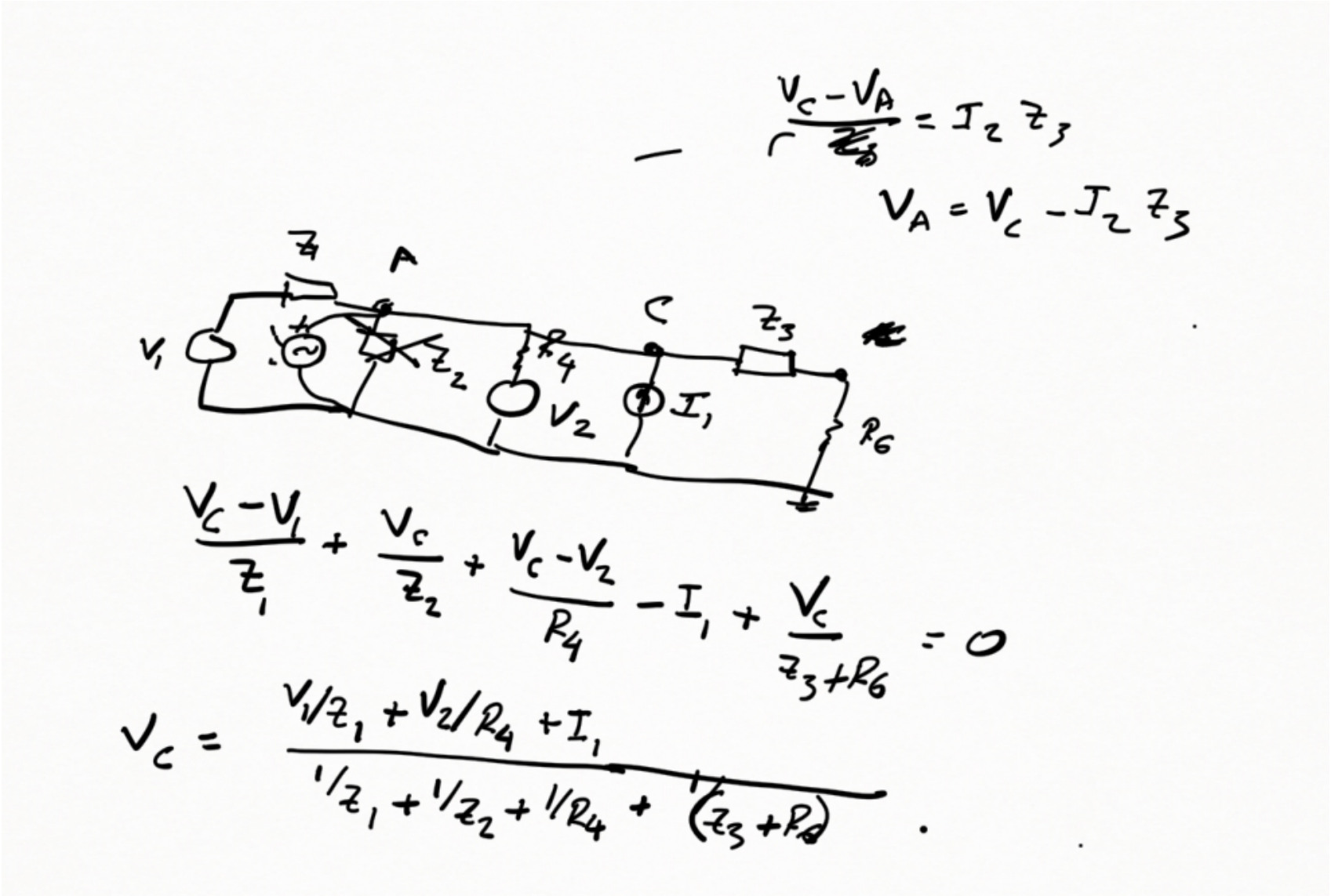
(10,15,17)-01-2025

Outline

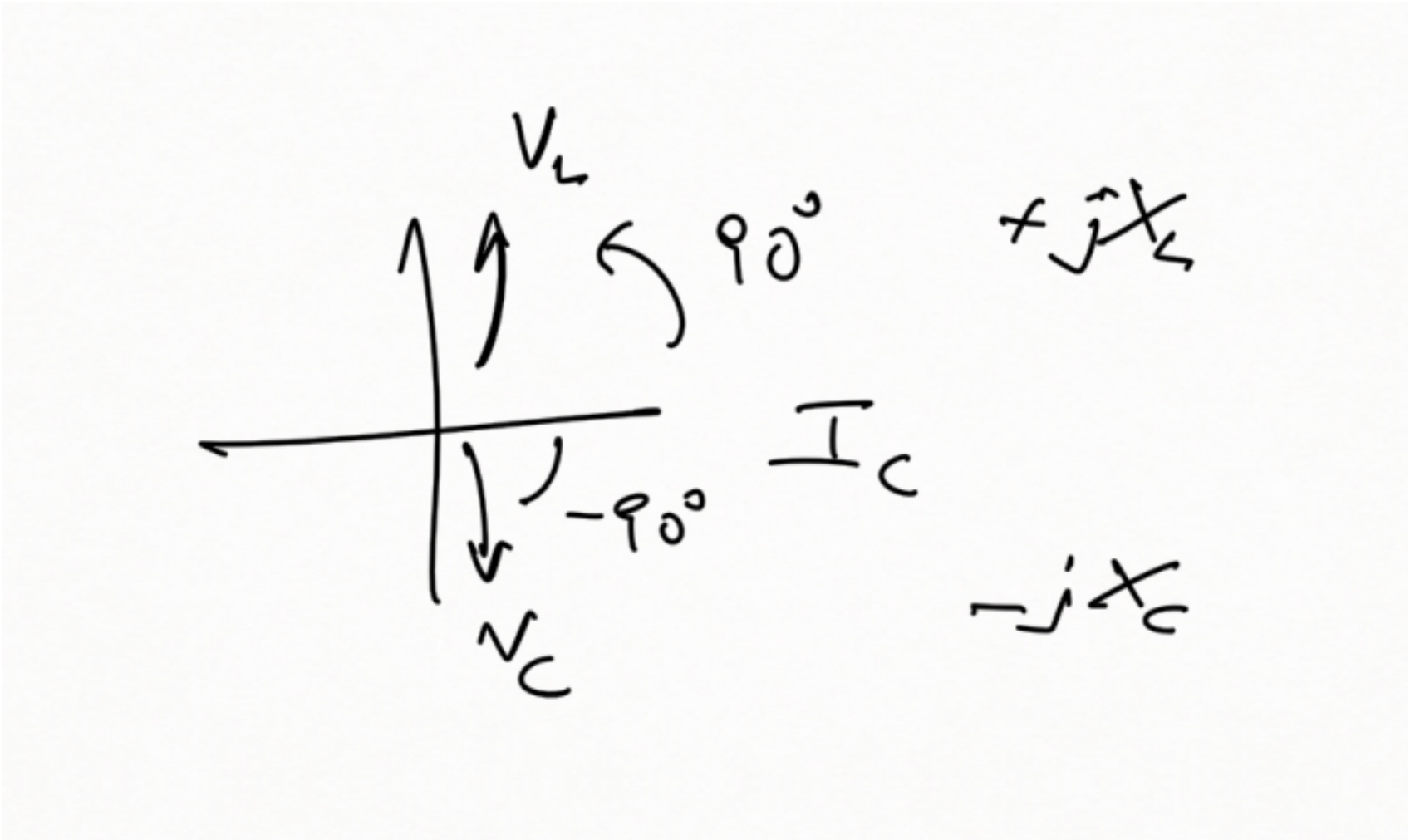
Topic

1. Ασκήσεις - Απορίες

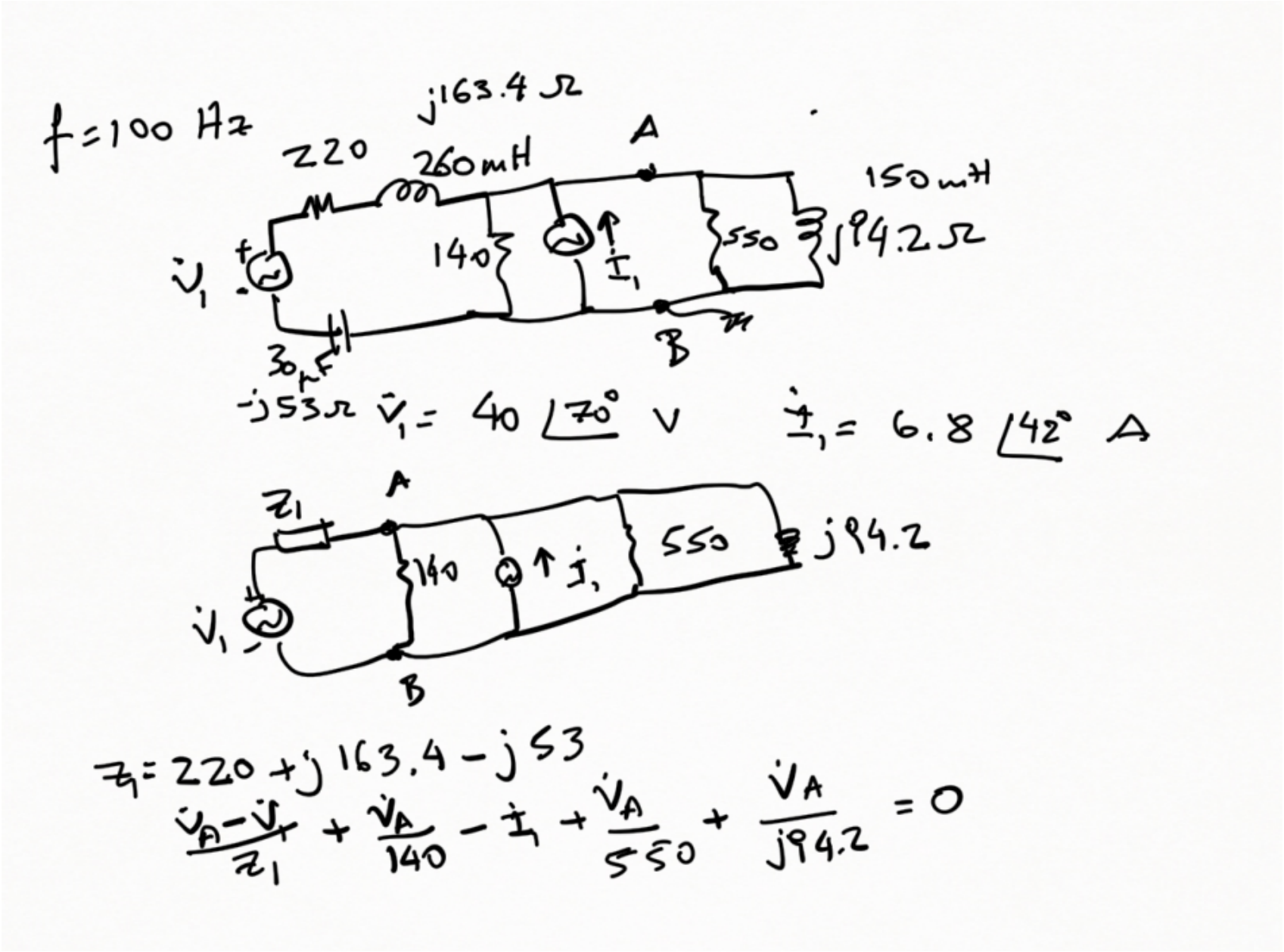
Ασκήσεις - Απορίες 1



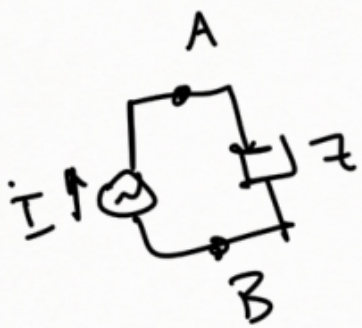
Ασκήσεις - Απορίες 2



Ασκήσεις - Απορίες 3



Ασκήσεις - Απορίες 4



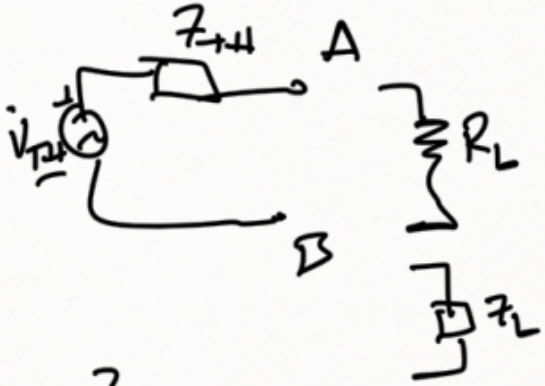
$\dot{V}_{TH} = \dot{I} \cdot Z$

$\dot{Z}_{TH} = Z$

$\dot{I}_N = \dot{I}$

$Z_L = Z_{TH}^*$

$P_{max} = \frac{|\dot{V}_{TH}|^2}{4\,Re\{Z_{TH}\}}$



$Re\{\ \}$

$Im\{\ \}$

$\alpha + jb = z$

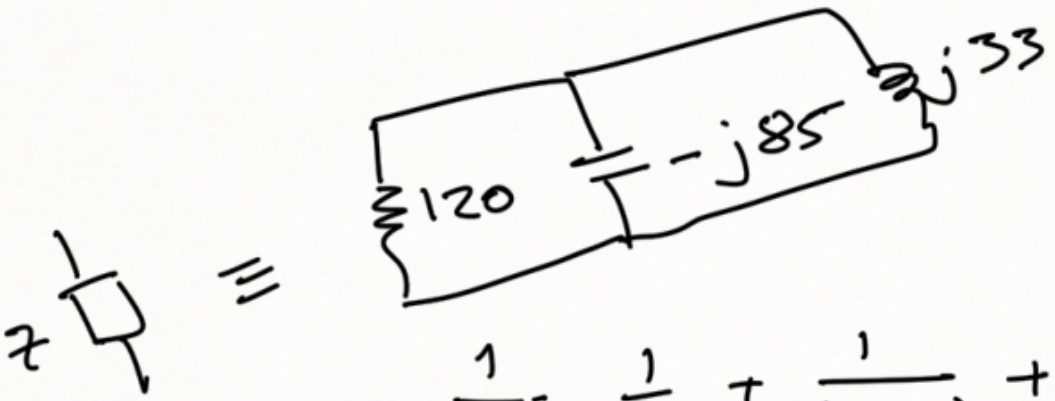
$Re\{z\} = \alpha$

$Im\{z\} = b$

$R_L = |Z_{TH}|$

$P_{max} = \frac{|\dot{V}_{TH}|^2}{2\,Re\{Z_{TH}\} + 2|Z_{TH}|}$

Ασκήσεις - Απορίες 5



$$\frac{1}{Z} = \frac{1}{120} + \frac{1}{(-j85)} + \frac{1}{j33} =$$

$$= 8.33\times10^{-3} + j11.8\times10^{-3} - j30.3\times10^{-3} =$$

$$= 0.0203 \angle -65.8^\circ$$

$$Z = 49.3 \angle 65.8^\circ$$

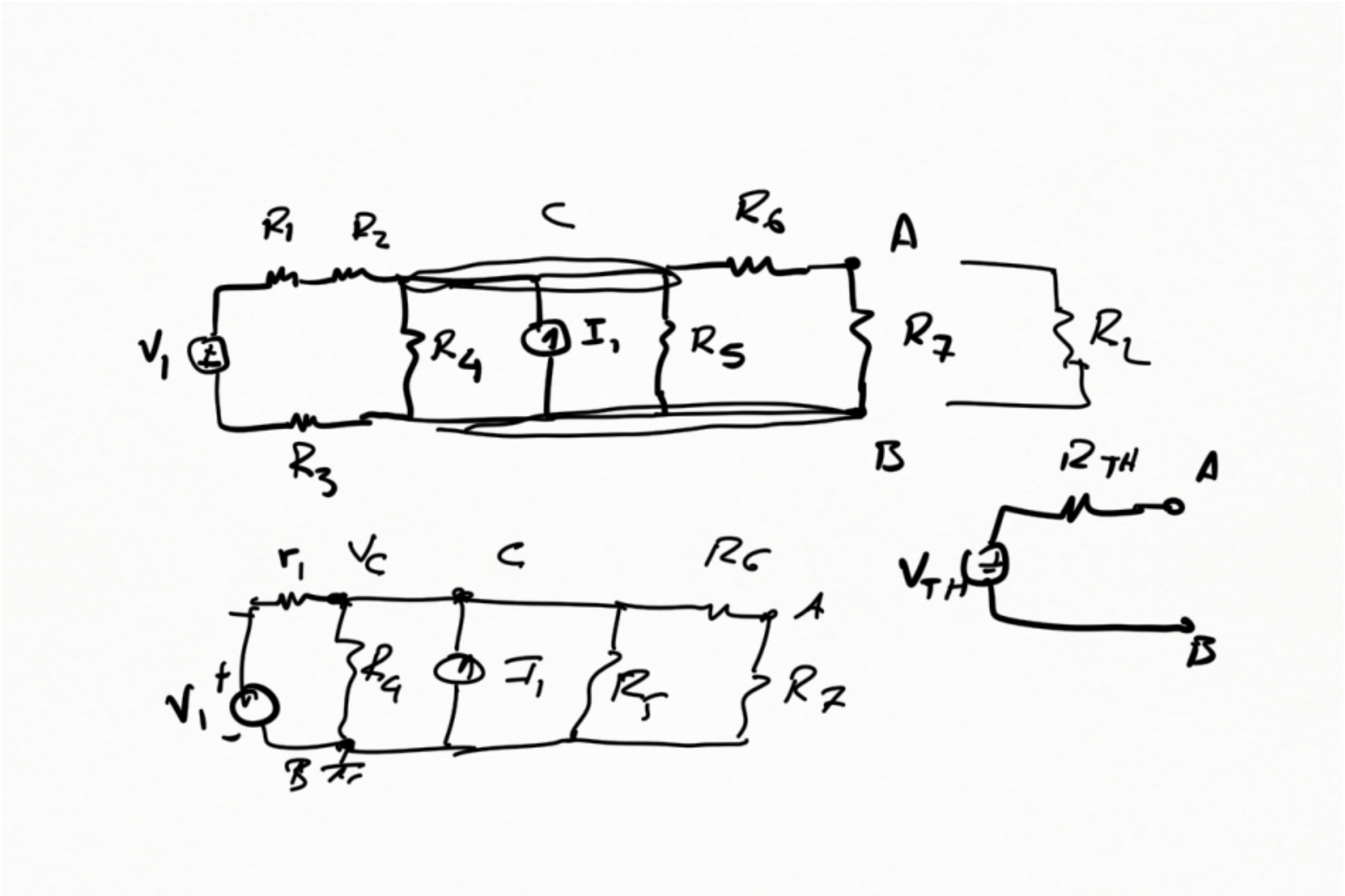
Ασκήσεις - Απορίες 6

$$(5.3+j20.1) * (-4.2+j6.7)$$

$$20.8\angle 75.2^\circ \qquad 7.91\angle 122.1^\circ$$

$$= (20.8 * 7.91)\angle 75.2 + 122.1^\circ = 164.5\angle 197.3^\circ$$

Ασκήσεις - Απορίες 7



Ασκήσεις - Απορίες 8