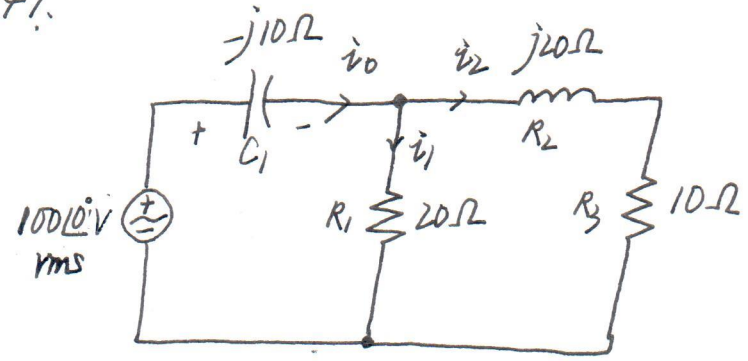
4).



$$Z_{并} = \frac{20\cdot(10+j20)}{20+(10+j20)} = 10.77 + j6.15\ \Omega$$

$$Z_{all} = Z_{并} - j10 = 10.77 + j6.15 - j10 = 10.77 - j3.85\ \Omega = 11.44\angle -19.67^\circ$$

$$\therefore i_0 = \frac{100\angle 0^\circ}{Z_{all}} = \frac{100\angle 0^\circ}{11.44\angle -19.67^\circ} = 8.23 + j2.94 = 8.74\angle 19.66^\circ$$

$$i_1 = \frac{(10+j20)}{20+(10+j20)}\cdot i_0 = 3.53 + j4.12 = 5.43\angle 49.4^\circ$$

$$i_2 = \frac{20}{20+(10+j20)}\cdot i_0 = 4.7 - j1.17 = 4.84\angle -14^\circ$$

$$P_S = 100\angle 0^\circ \cdot 8.74\angle 19.66^\circ = 874\angle 19.66^\circ = 823 - j294\ VA$$

$$P_{C1} = -j10\cdot i_0^2 = 483.9 - j590.9\ VA$$

$$P_{R1} = 20\cdot i_1^2 = -90.3 + j581.7\ VA$$

$$P_{R2} = j20\cdot i_2^2 = 219.96 + j414.4\ VA$$

$$P_{R3} = 10\cdot i_2^2 = 207.2 - j109.98\ VA$$