

13. A reciprocal, symmetric two-port network has an open-circuit input impedance of $1 - j \Omega$ and an open-circuit transfer impedance of 1Ω . Determine the load current if a load impedance of $j \Omega$ is connected to one port and a $10 \angle 0^\circ$ V source is connected to the other port.

A. $10 - 10j$ A

B. $-10j$ A

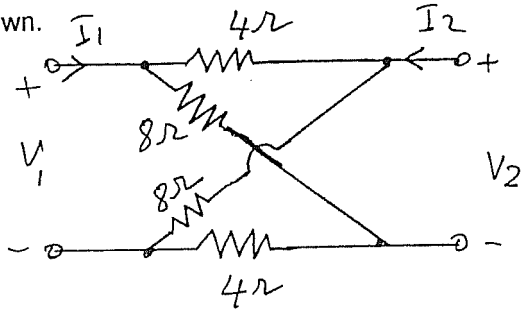
C. $10 + 10j$ A

D. $10j$ A

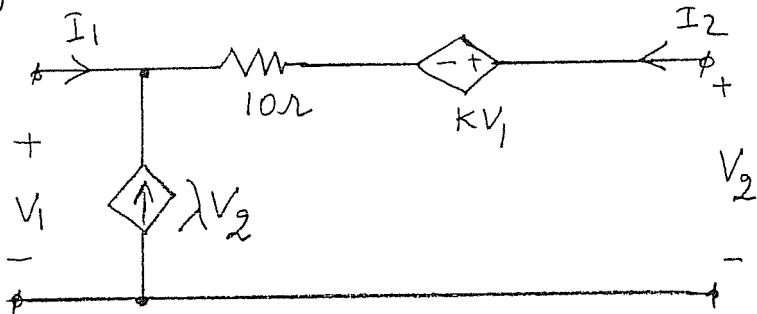
E. None of the above

8. Find the z' parameters of the network shown.

- ✓ a. $Z_{11} = Z_{22} = 6\Omega$, $Z_{12} = Z_{21} = 2\Omega$
b. $Z_{11} = Z_{22} = 12\Omega$, $Z_{12} = Z_{21} = 6\Omega$
c. $Z_{11} = Z_{22} = 12\Omega$, $Z_{12} = Z_{21} = 4\Omega$
d. $Z_{11} = Z_{22} = 6\Omega$, $Z_{12} = Z_{21} = 1\Omega$
e. None of the above



13. Consider the two ports circuit below. Find the value of k that makes this circuit reciprocal. ($\lambda = 0.1 \text{ A/V}$)



- a) $k = 1$
- b) $k = 2$
- c) $k = 3$
- d) $k = 4$
- e) None of the above