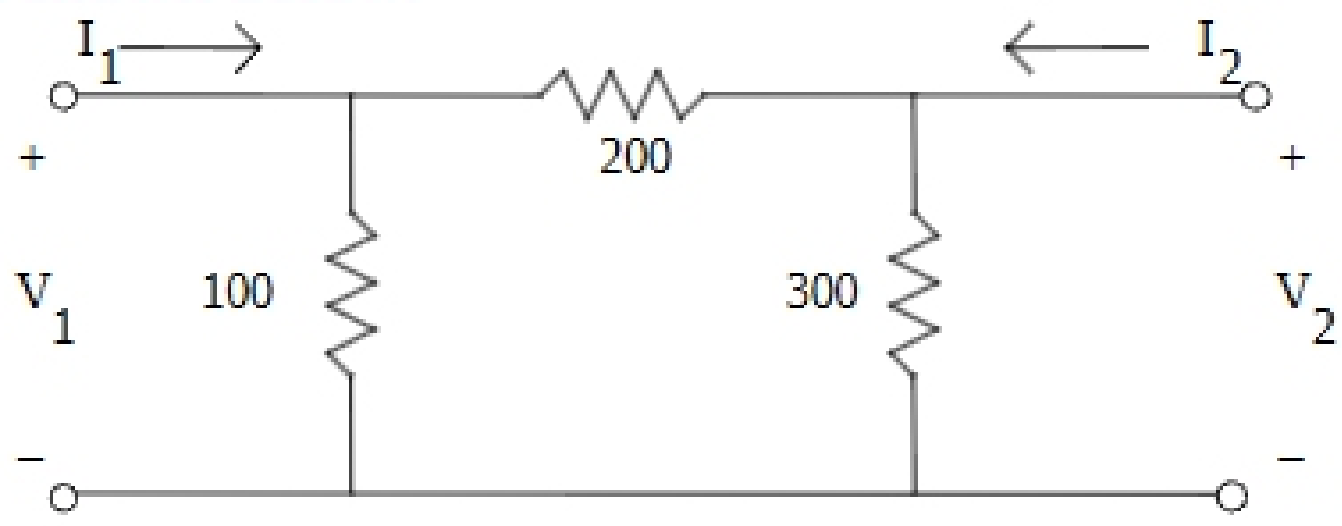


Reading Assignment: Chapter 18 in Electric Circuits, 8th Ed. by Nilsson

Example: Determine the h-parameters for the network shown below.



h - parameter equations :

$$V_1 = h_{11} \cdot I_1 + h_{12} \cdot V_2$$
$$I_2 = h_{21} \cdot I_1 + h_{22} \cdot V_2$$

Calculation of 2-port parameters using network equations

Consider the z-parameter equations shown below.

$$V_1 = z_{11} \cdot I_1 + z_{12} \cdot I_2$$

$$V_2 = z_{21} \cdot I_1 + z_{22} \cdot I_2$$

Note that V_1 and V_2 are functions of I_1 and I_2 . If general sources, I_1 and I_2 are added to a network and the voltages V_1 and V_2 are calculated, the result will be expressions for V_1 and V_2 that are functions of I_1 and I_2 . So the z-parameter equations are naturally generated.

Similarly, y-parameters can be found by adding two general voltage sources V_1 and V_2 and solving for the currents I_1 and I_2 .

Example: Determine the y-parameters using network equations for the network shown below.

