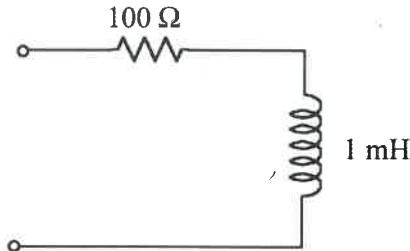


Special Problem #1

For the network shown below, find a parallel combination of two components that exhibit the same input impedance (or admittance) when the frequency of operation is:

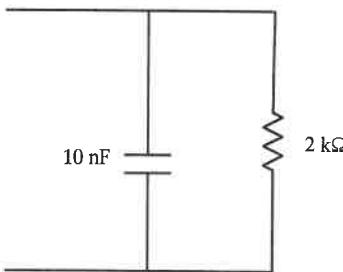


- (a) $\omega = 0.1 \times 10^5$
- (b) $\omega = 1.0 \times 10^5$
- (c) $\omega = 10.0 \times 10^5$

In each equivalent network, resistors should be specified in Ohms, inductors in Henries, and Capacitors in Farads.

Special Problem #1a

For the network shown below, find a series combination of two components that exhibit the same input impedance (or admittance) when the frequency of operation is:



- (a) $\omega = 0.5 \times 10^4$
- (b) $\omega = 5 \times 10^4$
- (c) $\omega = 50 \times 10^4$

In each equivalent network, resistors should be specified in Ohms, inductors in Henries, and Capacitors in Farads.