Chapter 9, Problem 93.

A power transmission system is modeled as shown in Fig. 9.92. Given the source voltage and circuit elements

$\mathbf{V}_s = 115\angle 0°$ V, source impedance
$\mathbf{Z}_s = (1 + j0.5)\ \Omega$, line impedance
$\mathbf{Z}_t = (0.4 + j0.3)\ \Omega$, and load impedance
$\mathbf{Z}_L = (23.2 + j18.9)\ \Omega$,

find the load current $\mathbf{I}_L$.

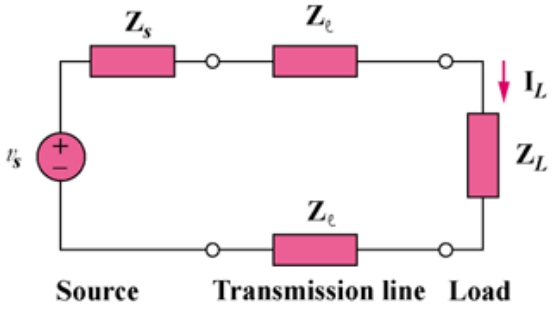

Figure 9.92
For Prob. 9.93.