

### Chapter 11, Problem 52.

In the circuit shown in Fig. 11.71, device A receives 2 kW at 0.8 pf lagging, device B receives 3 kVA at 0.4 pf leading, while device C is inductive and consumes 1 kW and receives 500 VARs.

- (a) Determine the power factor of the entire system.
- (b) Find  $\mathbf{I}$  given that  $\mathbf{V}_s = 120\angle 45^\circ \text{ V}$ .

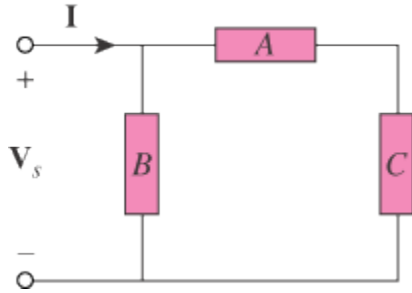


Figure 11.71  
For Prob. 11.52.