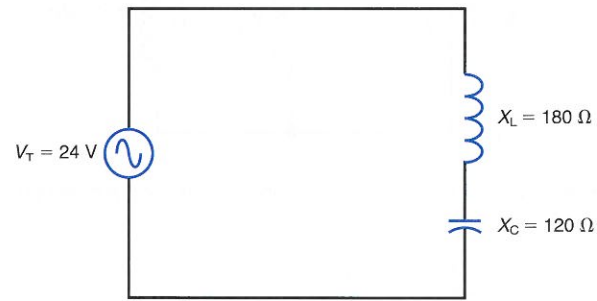


- 23-12 In Fig. 23-22, what is the phase relationship between
- V_A and I_T ?
 - V_A and I_2 ?
 - V_A and I_T ?

SECTION 23-4 OPPOSITE REACTANCES CANCEL

- 23-13 In Fig. 23-23, solve for
- the net reactance, X .
 - the current, I .
 - the inductor voltage, V_L .
 - the capacitor voltage, V_C .

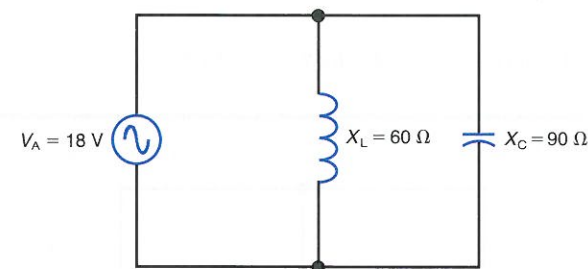
Figure 23-23



- 23-14 In Fig. 23-23, what is the phase relationship between
- X_L and X_C ?
 - V_L and I ?
 - V_C and I ?
 - V_T and I ?
 - V_L and V_C ?
 - V_T and I if the values of X_L and X_C are interchanged?

- 23-15 In Fig. 23-24, solve for
- the inductive branch current, I_L .
 - the capacitive branch current, I_C .
 - the net line current, I_T .
 - the net reactance, X .

Figure 23-24



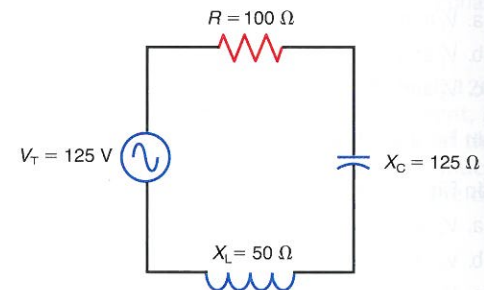
- 23-16 In Fig. 23-24, what is the phase relationship between
- I_L and V_A ?
 - I_C and V_A ?

- I_L and I_C ?
- V_A and I_T ?
- V_A and I_T if the values of X_L and X_C are interchanged?

SECTION 23-5 SERIES REACTANCE AND RESISTANCE

- 23-17 In Fig. 23-25, solve for
- the net reactance, X .
 - Z_T .
 - I .
 - V_R .
 - V_L .
 - V_C .
 - θ_Z .

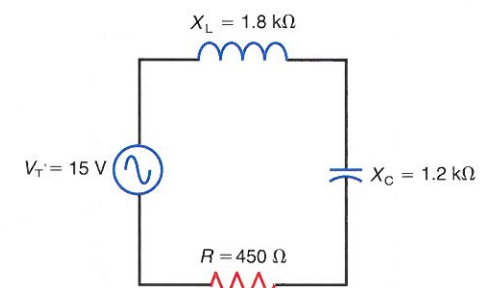
Figure 23-25



- 23-18 In Fig. 23-25, what is the phase relationship between
- X_L and X_C ?
 - V_L and I ?
 - V_C and I ?
 - V_R and I ?
 - V_L and V_C ?
 - V_T and I ?
 - V_T and V_R ?
 - V_T and I if the values of X_L and X_C are interchanged?

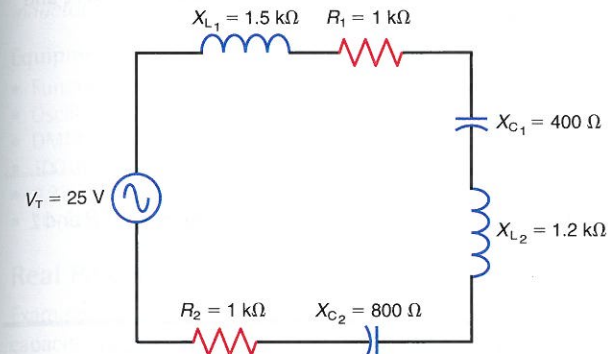
- 23-19 Repeat Prob. 23-17 for the circuit in Fig. 23-26.

Figure 23-26



- 23-20 In Fig. 23-27, solve for
- the net reactance, X .
 - Z_T .
 - I .
 - V_{R_1} and V_{R_2} .
 - V_{L_1} and V_{L_2} .
 - V_{C_1} and V_{C_2} .
 - θ_Z .

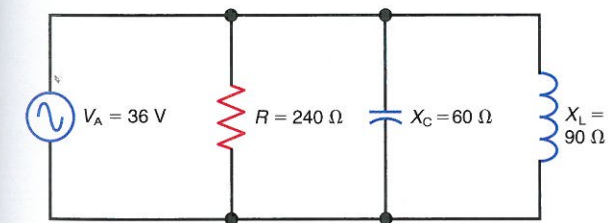
Figure 23-27



SECTION 23-6 PARALLEL REACTANCE AND RESISTANCE

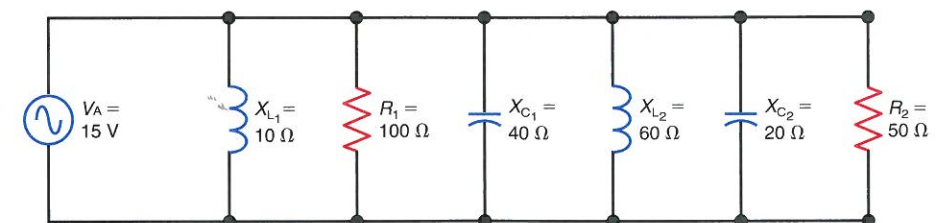
- 23-21 In Fig. 23-28, solve for
- I_R .
 - I_C .
 - I_L .
 - the net reactive branch current, I_X .
 - I_T .
 - Z_{EQ} .
 - θ_T .

Figure 23-28



- 23-22 In Fig. 23-28, what is the phase relationship between
- V_A and I_R ?
 - V_A and I_C ?

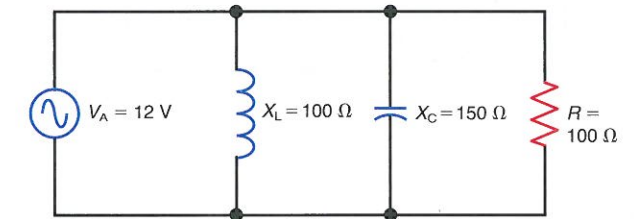
Figure 23-30



- V_A and I_C ?
- I_L and I_C ?
- V_A and I_T ?
- V_A and I_T if the values of X_L and X_C are interchanged?

- 23-23 Repeat Prob. 23-21 for the circuit in Fig. 23-29.

Figure 23-29



- 23-24 In Fig. 23-30, solve for
- I_{R_1} and I_{R_2} .
 - I_{L_1} and I_{L_2} .
 - I_{C_1} and I_{C_2} .
 - the net reactive branch current, I_X .
 - I_T .
 - Z_{EQ} .
 - θ_T .

SECTION 23-7 SERIES-PARALLEL REACTANCE AND RESISTANCE

- 23-25 In Fig. 23-31, solve for
- Z_T .
 - I_T .
 - V_{R_1} .
 - V_{C_1} , V_{C_2} , and V_{C_3} .
 - V_{L_1} and V_{L_2} .
 - θ_Z .

SECTION 23-8 REAL POWER

- 23-26 Determine the real power, apparent power, and power factor (PF) for each of the following circuits:
- Fig. 23-17.
 - Fig. 23-19.
 - Fig. 23-22.
 - Fig. 23-24.
- 23-27 Determine the real power, apparent power, and power factor (PF) for each of the following circuits:
- Fig. 23-25.
 - Fig. 23-26.