5–42 How much is R_{EQ} in Fig. 5–26 if $R_1 = R_2 = R_3 = R_4 = 2.2\ k\Omega$?

5–43 A technician is using an ohmmeter to measure a variety of different resistor values. Assume the technician has a body resistance of 750 kΩ. How much resistance will the ohmmeter read if the fingers of the technician touch the leads of the ohmmeter when measuring the following resistors:

a. 270 Ω.

b. 390 kΩ.

c. 2.2 MΩ.

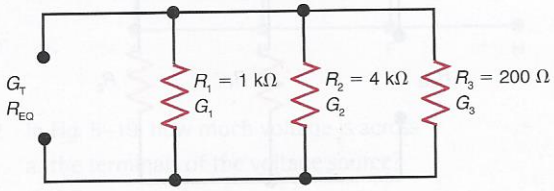
d. 1.5 kΩ.

e. 10 kΩ.

SECTION 5–5 CONDUCTANCES IN PARALLEL

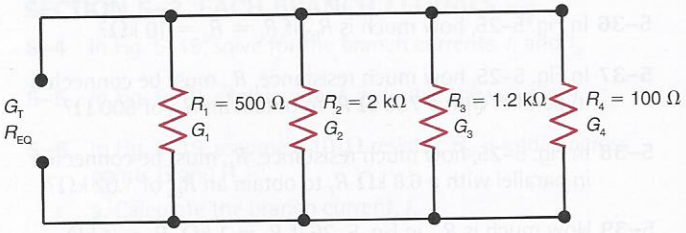
5–44 In Fig. 5–27, solve for G_1, G_2, G_3, G_T, and R_{EQ}.

Figure 5–27



5–45 In Fig. 5–28, solve for G_1, G_2, G_3, G_4, G_T, and R_{EQ}.

Figure 5–28



5–46 Find the total conductance, G_T for the following branch conductances; $G_1 = 1$ mS, $G_2 = 200\ \mu S$, and $G_3 = 1.8$ mS. How much is R_{EQ}?

5–47 Find the total conductance, G_T for the following branch conductances; $G_1 = 100$ mS, $G_2 = 66.67$ mS, $G_3 = 250$ mS, and $G_4 = 83.33$ mS. How much is R_{EQ}?

SECTION 5–6 TOTAL POWER IN PARALLEL CIRCUITS

5–48 In Fig. 5–20, solve for P_1, P_2, P_3, and P_T.

5–49 In Fig. 5–21, solve for P_1, P_2, P_3, P_4, and P_T.

5–50 In Fig. 5–22, solve for P_1, P_2, P_3, and P_T.

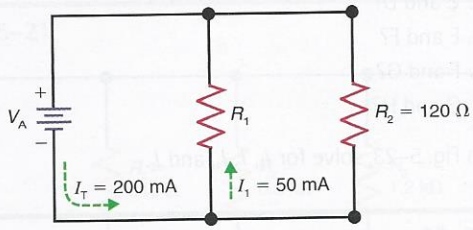
5–51 In Fig. 5–23, solve for P_1, P_2, P_3, and P_T.

5–52 In Fig. 5–24, solve for P_1, P_2, P_3, P_4, and P_T.

SECTION 5–7 ANALYZING PARALLEL CIRCUITS WITH RANDOM UNKNOWNS

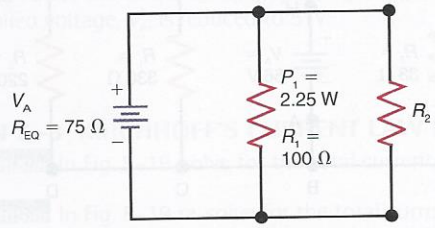
5–53 In Fig. 5–29, solve for V_A, R_1, I_2, R_{EQ}, P_1, P_2, and P_T.

Figure 5–29



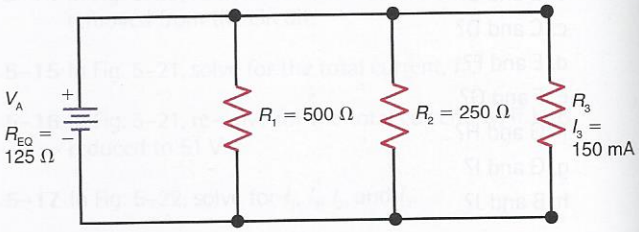
5–54 In Fig. 5–30, solve for V_A, I_1, I_2, R_2, I_T, P_2, and P_T.

Figure 5–30



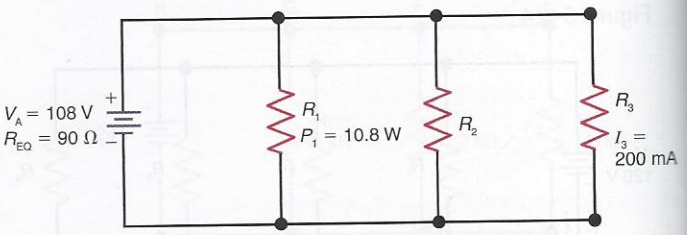
5–55 In Fig. 5–31, solve for R_3, V_A, I_1, I_2, I_T, P_1, P_2, P_3, and P_T.

Figure 5–31



5–56 In Fig. 5–32, solve for I_T, I_1, I_2, R_1, R_2, R_3, P_2, P_3, and P_T.

Figure 5–32



5–57 In Fig. 5–33, solve for I_T, I_1, I_2, I_4, R_3, R_4, P_1, P_2, P_3, P_4, and P_T.

Figure 5–33