1.12 Consider the circuit shown in Fig. P1.12. (a) Given $i_1 = -4$ A, find v_1. (b) Given $i_2 = 1$ A, find v_2. (c) Given $i_3 = 1$ A, find v_3. (d) Given $i_4 = 2$ A, find v_4.

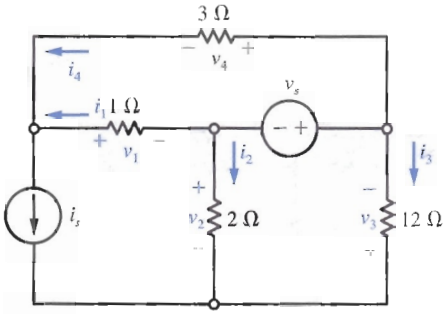


Fig.P1.12

1.13 Consider the circuit in Fig. P1.12. (a) Given $v_1 = -2$ V, find i_1. (b) Given $v_2 = -1$ V, find i_2. (c) Given $v_3 = -6$ V, find i_3. (d) Given $v_4 = 3$ V, find i_4.

1.14 Consider the circuit in Fig. P1.14. (a) Given $i_1 = 3$ A and $v_1 = 6$ V, find R_1. (b) Given $i_2 = 3$ A and $v_2 = -15$ V, find R_2. (c) Given $i_3 = -2$ A and $v_3 = 6$ V, find R_3. (d) Given $i_4 = -1$ A and $v_3 = 6$ V, find R_4.

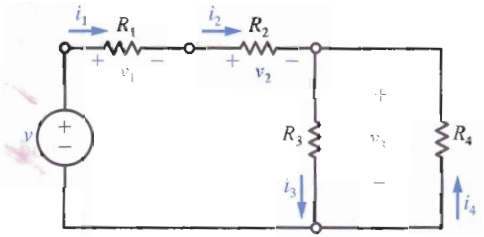


Fig. P1.14

1.15 Consider the circuit in Fig. P1.14. (a) Given $i_1 = 6$ A and $v_1 = 18$ V, find R_1. (b) Given $i_2 = 6$ A and $v_2 = -36$ V, find R_2. (c) Given $i_3 = 4$ A and $v_3 = 16$ V, find R_3. (d) Given $i_4 = -2$ A and $v_3 = 16$ V, find R_4.

1.16 For the circuit shown in Fig. P1.16, find v when (a) $i_s = 1$ A, (b) $i_s = 2$ A, (c) $i_s = 3$ A.

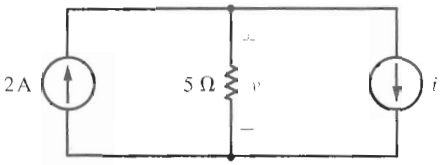


Fig. P1.16

1.17 For the circuit shown in Fig. P1.17, find i when (a) $v_s = 1$ V, (b) $v_s = 2$ V, (c) $v_s = 3$ V.

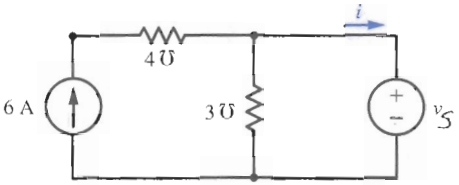


Fig. P1.17

1.18 For the circuit shown in Fig. P1.18, find v_4 when (a) $v_s = 2$ V, (b) $v_s = 4$ V, (c) $v_s = 6$ V.

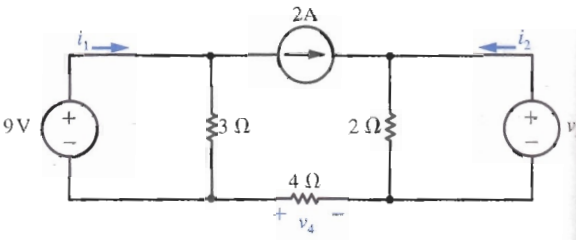


Fig. P1.18

1.19 For the circuit shown in Fig. P1.19, suppose that $i_1 = 6$ A. Use the current-divider formula to determine i_2, i_3, i_4, and i_5.

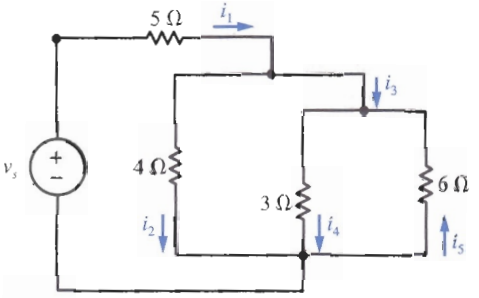


Fig. P1.19

1.20 For the circuit shown in Fig. P1.19, suppose that $i_4 = 4$ A. Use the current-divider formula to determine i_1, i_2, i_3, and i_5.

1.21 For the circuit shown in Fig. P1.19, suppose that $i_2 = -2$ A. Use the current-divider formula to determine i_1, i_3, i_4, and i_5.

1.22 For the circuit given in Fig. P1.19, suppose that $i_5 = 4$ A. Use the current-divider formula to determine i_1, i_2, i_3, and i_4.

1.23 For the circuit shown in Fig. P1.23, suppose that $i_1 = 2$ A. Find v for the case that (a) $i_2 = 1$ A, (b) $i_2 = 2$ A, and (c) $i_2 = 3$ A.

1.24 Consider the circuit shown in Fig. P1.23. Find v when (a) $i_1 = 12$ A and $i_2 = 6$ A, (b) $i_1 = 6$ A and $i_2 = 6$ A, (c) $i_1 = 6$ A and $i_2 = 12$ A.

1.25 Find the variables indicated for the circuits shown in Fig. P1.25.

1.26 Find the variables indicated for the circuits shown in Fig. P1.26. (See p. 48.)

1.27 Find the variables indicated for the circuits shown in Fig. P1.27. (See p. 48.)

1.28 For the circuit shown in Fig. P1.28, find the variables indicated when R is (a) 2 Ω, (b) 4 Ω, and (c) 6 Ω.

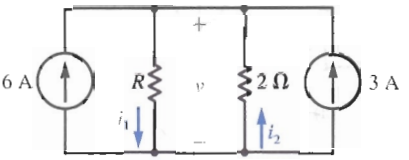


Fig. P1.28

1.29 For the circuit shown in Fig. P1.29, find the variables indicated when R is (a) 2 Ω, (b) 4 Ω, and (c) 6 Ω.

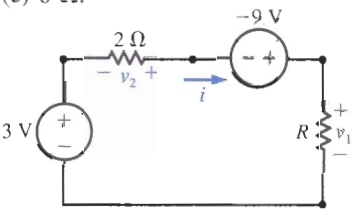


Fig. P1.29

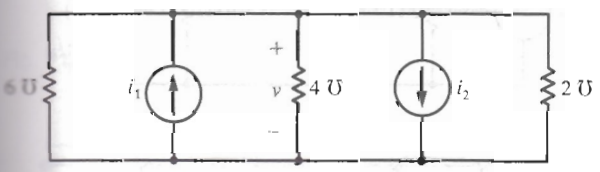
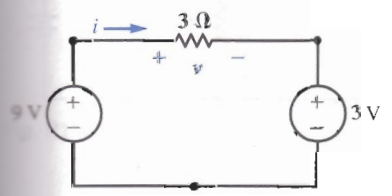
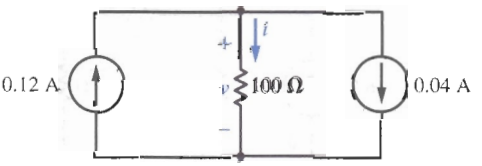


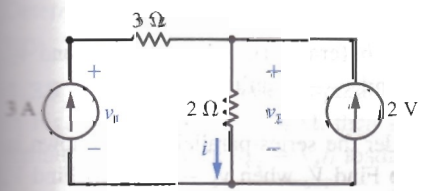
Fig. P1.23



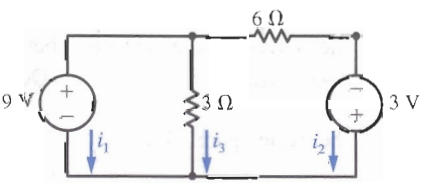
(a)



(b)



(c)



(d)

Fig. P1.25 *a-d*