1.42 For the circuit shown in Fig. P1.42, find \( i_1 \) when (a) \( K = 2 \), (b) \( K = 3 \), and (c) \( K = 4 \).

![Fig. P1.42](image)

1.43 The circuit shown in Fig. P1.43 contains a voltage-dependent voltage source as well as a current-dependent current source. Find \( i_1 \) when (a) \( K = -3 \), (b) \( K = -1.5 \), and (c) \( K = 1.5 \).

![Fig. P1.43](image)

1.44 Consider the circuit shown in Fig. P1.44. Find \( v \) when (a) \( K = 2 \), and (b) \( K = 4 \).

![Fig. P1.44](image)

1.45 Consider the circuit shown in Fig. P1.45. Find \( i_1 \) when (a) \( K = 2 \), and (b) \( K = 4 \).

![Fig. P1.45](image)

1.46 Consider the circuit shown in Fig. P1.46. (a) Find the resistance \( R_{eq} = \frac{v}{i_1} \). (b) Find the voltage \( v_2 \) in terms of the applied voltage \( v \).

![Fig. P1.46](image)

1.47 Consider the circuit shown in Fig. P1.47. (a) Find the resistance \( R_{eq} = \frac{v}{i_1} \). (b) Use voltage division to find \( v \) in terms of \( v_2 \). (c) Find the voltage \( v_2 \) in terms of the applied voltage \( v \).

![Fig. P1.47](image)

1.48 For the circuit shown in Fig. P1.48, find that \( R = 10 \).

![Fig. P1.48](image)

1.49 For the circuit shown in Fig. P1.49, find that \( R = 8 \).

![Fig. P1.49](image)
2.1 For the circuit shown in Fig. P2.1, select node d as the reference node. (a) Use nodal analysis to find the node voltages. (b) Use the node voltages to determine $i_1$, $i_2$, $i_3$, and $i_4$.

![Fig. P2.1](image)

2.6 Find the node voltages for the circuit shown in Fig. P2.6.

![Fig. P2.6](image)

2.2 For the circuit shown in Fig. P2.1, select node c as the reference node. (a) Use nodal analysis to find the node voltages. (b) Use the node voltages to determine $i_1$, $i_2$, $i_3$, and $i_4$.

2.3 For the circuit shown in Fig. P2.1, select node b as the reference node. (a) Use nodal analysis to find the node voltages. (b) Use the node voltages to determine $i_1$, $i_2$, $i_3$, and $i_4$.

2.4 For the circuit shown in Fig. P2.1, select node a as the reference node. (a) Use nodal analysis to find the node voltages. (b) Use the node voltages to determine $i_1$, $i_2$, $i_3$, and $i_4$.

2.5 Find the node voltages for the circuit shown in Fig. P2.5.

![Fig. P2.5](image)

2.7 Find the node voltages for the circuit shown in Fig. P2.7. (See p. 100.)

2.8 Find the node voltages for the circuit shown in Fig. P2.8.

![Fig. P2.8](image)

2.9 Find the node voltages for the circuit shown in Fig. P2.9.

![Fig. P2.9](image)
2.60 Consider the circuit shown in Fig. P2.60. (a) Find the portion of \( i \) and the portion of \( v \) that are due to the 5-V voltage source. (b) Find the portion of \( i \) and the portion of \( v \) that are due to the 1-A current source. (c) Find \( i \) and \( v \).

2.61 Consider the circuit shown in Fig. P2.61. (a) Find the portion of \( i \) and the portion of \( v \) that are due to the 2-A current source. (b) Find the portion of \( i \) and the portion of \( v \) that are due to the 6-V voltage source. (c) Find the portion of \( i \) and the portion of \( v \) that are due to the 2-V voltage source. (d) Find \( i \) and \( v \).

2.62 Consider the circuit shown in Fig. P2.62. (a) Find the portion of \( i \) and the portion of \( v \) that are due to the 12-V voltage source. (b) Find the portion of \( i \) and the portion of \( v \) that are due to the 6-V voltage source. (c) Find the portion of \( i \) and the portion of \( v \) that are due to the 6-A current source. (d) Find \( i \) and \( v \).