

Started on Sunday, 9 October 2016, 11:38 PM

State Finished

Completed on Monday, 10 October 2016, 2:37 AM

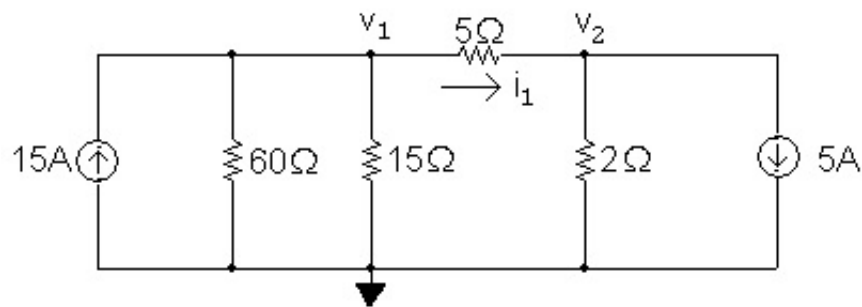
Time taken 2 hours 58 mins

Grade 90.00 out of 100.00

Question 1

Correct

Mark 10.00 out of 10.00



AP4.01_9ed

For this circuit, use the node-voltage method to find v_1 , v_2 , and i_1 .

$v_1 =$ ✓ V

$v_2 =$ ✓ V

$i_1 =$ ✓ A

Numeric Answers

$v_1 = 60 \text{ V}$

$v_2 = 10 \text{ V}$

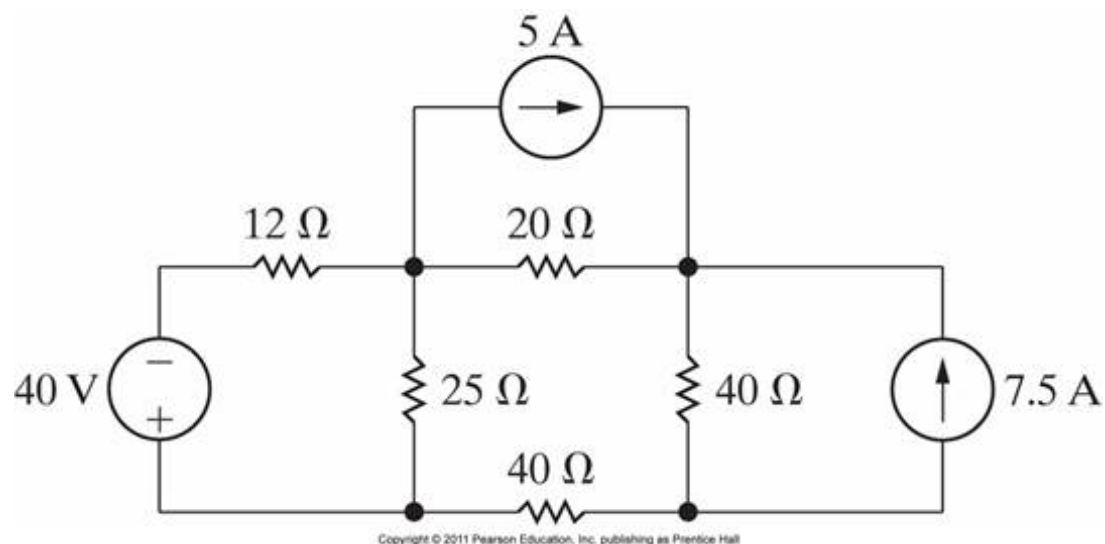
$i_1 = 10 \text{ A}$

Correct

Marks for this submission: 10.00/10.00.

Question 2

Correct

Mark 10.00 out of
10.00

P4.14_9ed

Use the node-voltage method to find

a) The power dissipated by the 12 resistor.

$$P_{12\Omega} = 75 \text{ W}$$

b) The power delivered or absorbed by the 7.5A current source.

$$P_{7.5A} = -1620 \text{ W}$$

Numeric Answers

a) $P_{12W} = 75 \text{ Watts}$

b) $P_{7.5A} = -1,620 \text{ Watts (delivered)}$

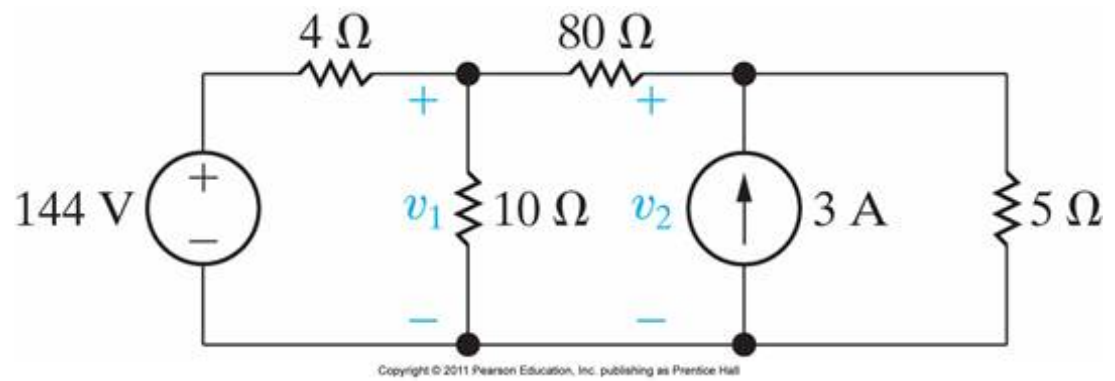
Correct

Marks for this submission: 10.00/10.00.

Question 3

Correct

Mark 10.00 out of 10.00



P4.06_9ed

Use the node-voltage method to find v_1 and v_2 in this circuit.

$$v_1 = 100 \text{ V}$$

$$v_2 = 20 \text{ V}$$

Numeric Answers

$$v_1 = 100 \text{ V}$$

$$v_2 = 20 \text{ V}$$

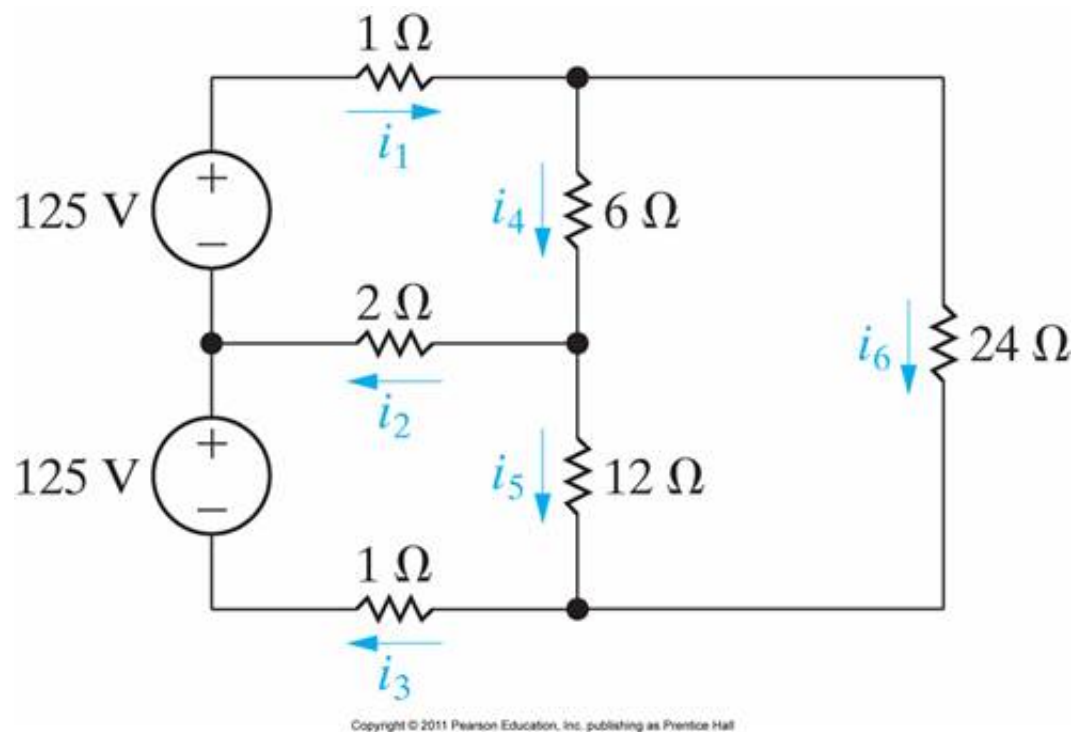
Correct

Marks for this submission: 10.00/10.00.

Question 4

Correct

Mark 10.00 out of 10.00



P4.12_9ed

Use the node-voltage method to find the branch currents.

$$i_1 = 23.76 \text{ A}$$

$$i_2 = 5.33 \text{ A}$$

$$i_3 = 18.43 \text{ A}$$

$$i_4 = 15.10 \text{ A}$$

$$i_5 = 9.77 \text{ A}$$

$$i_6 = 8.66 \text{ A}$$

Numeric Answers

$$i_1 = 23.76 \text{ Amps}$$

$$i_2 = 5.33 \text{ Amps}$$

$$i_3 = 18.43 \text{ Amps}$$

$$i_4 = 15.10 \text{ Amps}$$

$$i_5 = 9.77 \text{ Amps}$$

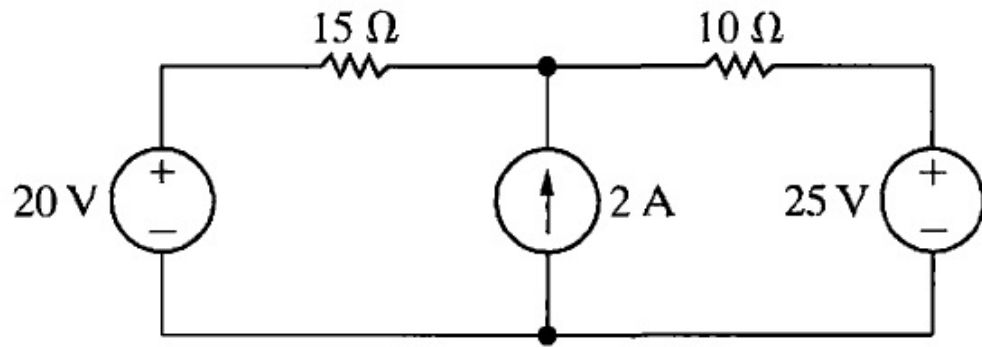
$$i_6 = 8.66 \text{ Amps}$$

Correct

Marks for this submission: 10.00/10.00.

Question 5

Correct

Mark 10.00 out of
10.00

AP4.13_9ed

Find the power absorbed/delivered by the 2 A current source in this circuit.

$$P_{2A} = \boxed{-70} \checkmark \text{ W}$$

“+” = absorbed and “-” = delivered

Numeric Answer

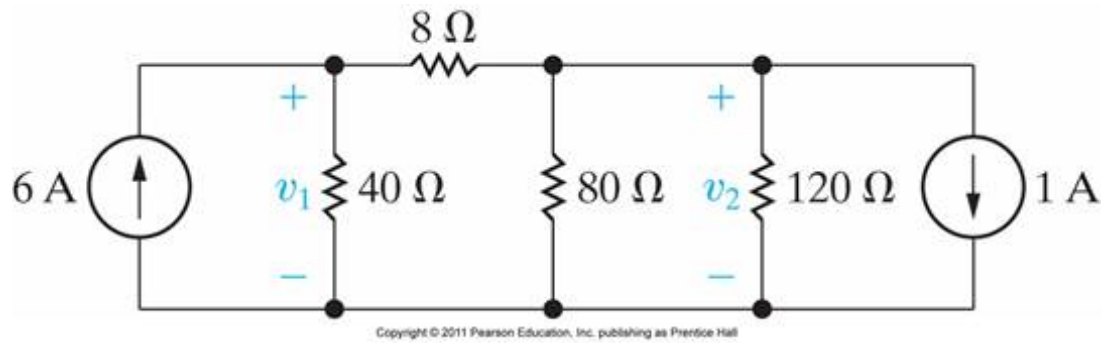
$$P_{2A} = -70 \text{ W}$$

Correct

Marks for this submission: 10.00/10.00.

Question 6

Correct

Mark 10.00 out of
10.00

P4.08_9ed

Use the node-voltage method to find v_1 and v_2 in this circuit.

$$v_1 = \boxed{120} \text{ V}$$

$$v_2 = \boxed{96} \text{ V}$$

Numeric Answers

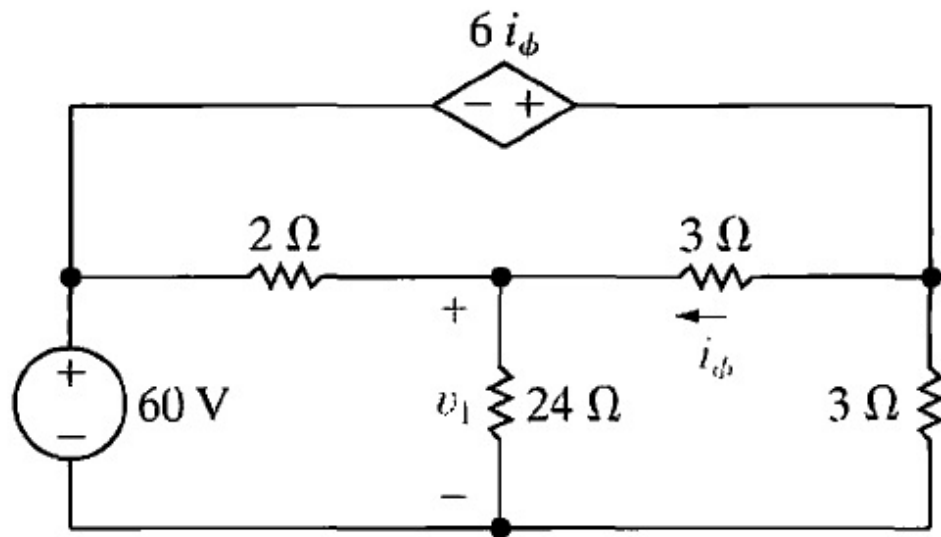
$$v_1 = 120 \text{ V} \quad v_2 = 96 \text{ V}$$

Correct

Marks for this submission: 10.00/10.00.

Question 7

Correct

Mark 10.00 out of
10.00

AP4.06_9ed

Use the node-voltage method to find v_1 in the circuit shown

$$v_1 = \boxed{48} \checkmark \text{ V}$$

Numeric Answers

$$v_1 = 48 \text{ V}$$

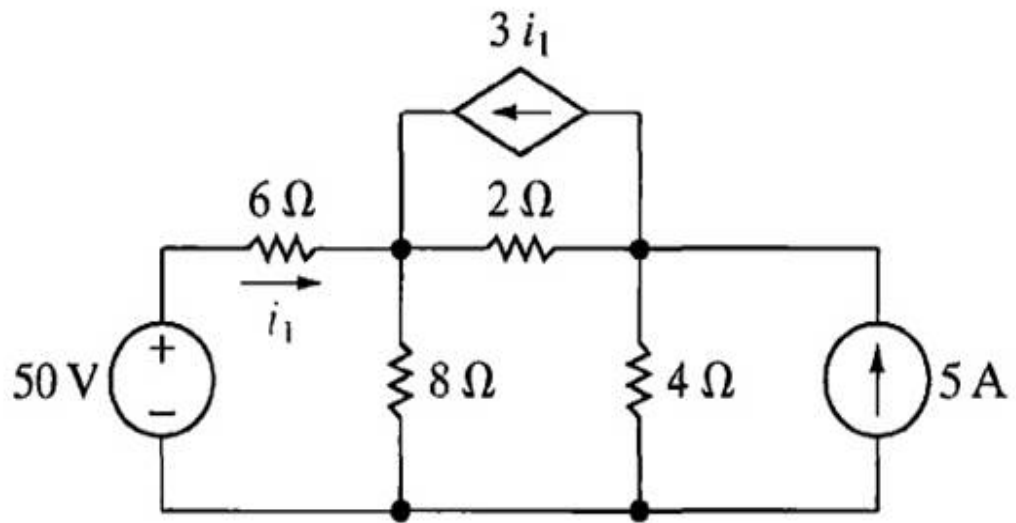
Correct

Marks for this submission: 10.00/10.00.

Question 8

Correct

Mark 10.00 out of 10.00



AP4.03a_9ed

For this circuit, use the node-voltage method to find:

 $V_{8\Omega} =$ \checkmark V which is the voltage across the $8\ \Omega$ (Ohm) resistor. $V_{4\Omega} =$ \checkmark V which is the voltage across the $4\ \Omega$ (Ohm) resistor. $i_1 =$ \checkmark A which is the current through the $6\ \Omega$ (Ohm) resistor.**Numeric Answers**

$$V_{8\Omega} = 32\text{ V} \quad V_{4\Omega} = 16\text{ V} \quad i_1 = 3\text{ A}$$

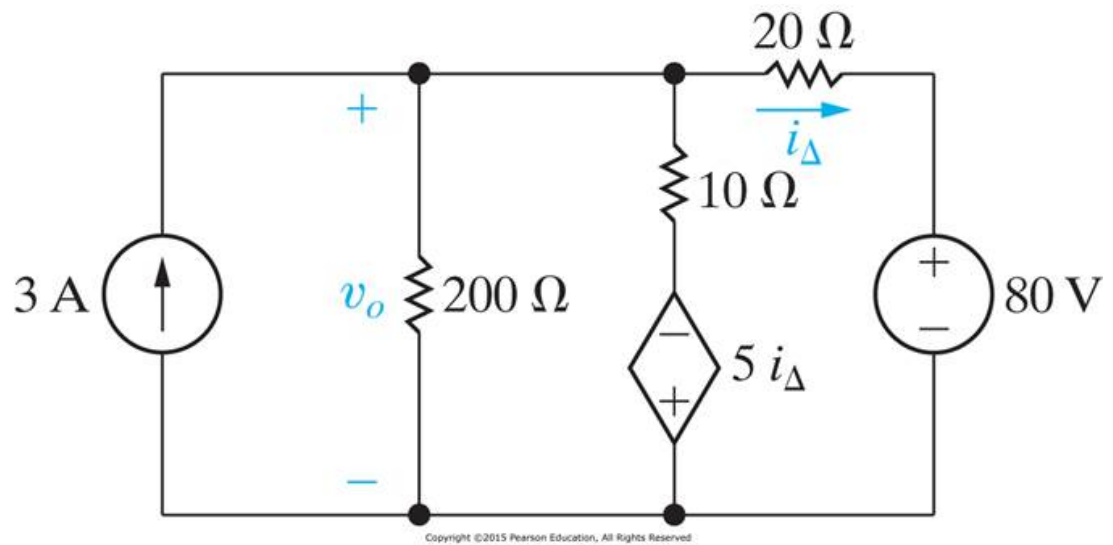
Correct

Marks for this submission: 10.00/10.00.

Question 9

Correct

Mark 10.00 out of 10.00



P4.17_10ed

a) Use the node-voltage method to find v_o in the circuit shown

$$v_o = 50 \text{ V}$$

b) Find the power absorbed/delivered by the dependent source P_{ds} .

$$P_{ds} = 31.875 \text{ W}$$

c) Find the power absorbed/delivered by the independent sources.

$$P_{3A} = -150 \text{ W}$$

$$P_{80V} = -120 \text{ W}$$

Numeric Answers

a) $v_o = 50 \text{ V}$

b) $P_{ds} = 31.875 \text{ W}$ absorbing

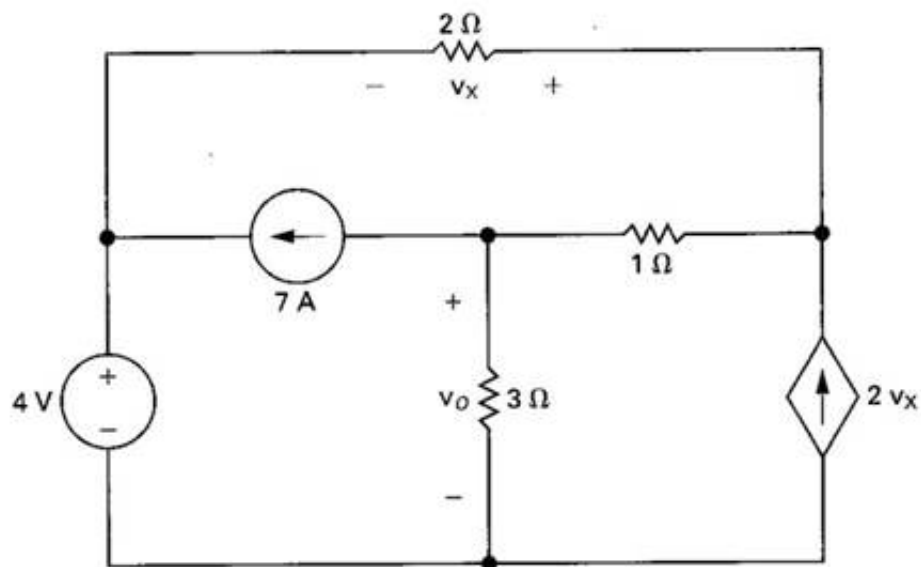
c) $P_{3A} = -150 \text{ W}$ delivering $P_{80V} = -120 \text{ W}$ delivering

Correct

Marks for this submission: 10.00/10.00.

Question 10

Incorrect

Mark 0.00 out of
10.00

P4.11_6ed

a) Use the node-voltage method to find v_o in the circuit shown

$$v_o = 9.67 \text{ V}$$

b) Find the power absorbed/delivered by the dependent current source.

$$P_{2v_x} = -17 \text{ W}$$

Numeric Answer

a) $v_o = 1.5 \text{ V}$

b) $P_{2v_x} = -90 \text{ W}$ delivering

Incorrect

Marks for this submission: 0.00/10.00.