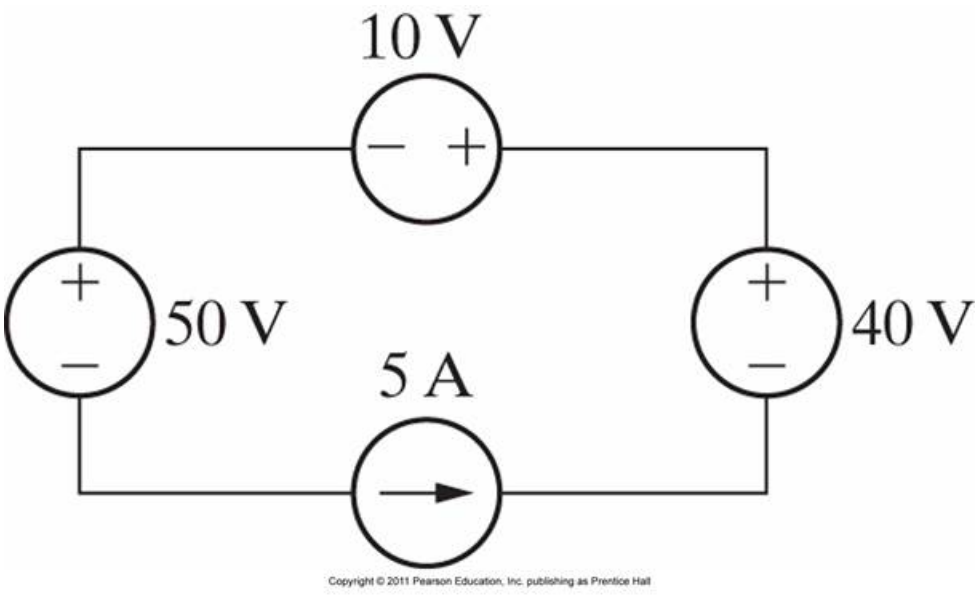
Started on	Monday, 12 September 2016, 12:17 AM
State	Finished
Completed on	Monday, 12 September 2016, 1:48 AM
Time taken	1 hour 30 mins
Grade	**100.00** out of 100.00

Question 1

Correct

Mark 10.00 out of 10.00



P2.01b_9ed

What is the total power developed by the following circuit?

Answer: -300

Numeric Answer

Power = -300 W

The correct answer is: -300

Correct

Marks for this submission: 10.00/10.00.

Question 2

Correct

Mark 10.00 out of 10.00

C1

An ideal current source is ....

Select one:

- A. defined as able to maintain a prescribed current regardless of the voltage across the device. ✓
- B. defined as able to maintain a prescribed voltage across the device regardless of the current through the device.
- C. only defined for independent current sources.
- D. only an abstraction and not useful in circuit analysis.

Your answer is correct.

An ideal current source is defined as able to maintain a prescribed current regardless of the voltage across the device.

The correct answer is: defined as able to maintain a prescribed current regardless of the voltage across the device.

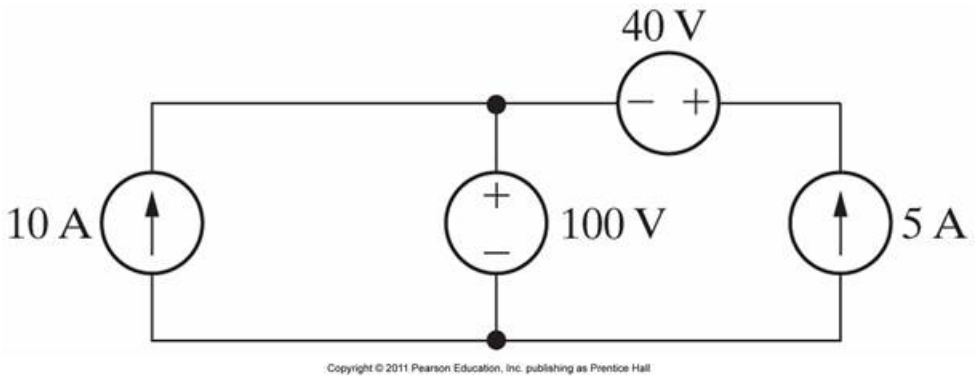
Correct

Marks for this submission: 10.00/10.00.

Question 3

Correct

Mark 10.00 out of 10.00



P2.04b_9ed

What is the power in the 100 V source?

P_{100V} =

Answer: 1500 ✓

Numeric Answer

P_{100V} =1,500 W

The correct answer is: 1500

Correct

Marks for this submission: 10.00/10.00.

Question 4

Correct

Mark 10.00 out of 10.00

C2

An ideal voltage source is ....

Select one:

- A. defined as able to maintain the prescribed voltage regardless of the current in the device. ✓
- B. defined as able to maintain the prescribed current regardless of the voltage in the device.
- C. only defined for independent current sources.
- D. only an abstraction and not useful in circuit analysis.

Your answer is correct.

An ideal voltage source is defined as able to maintain the prescribed voltage regardless of the current in the device.

The correct answer is: defined as able to maintain the prescribed voltage regardless of the current in the device.

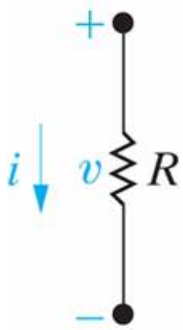
Correct

Marks for this submission: 10.00/10.00.

Question 5

Correct

Mark 10.00 out of 10.00



CQ2.04

Given: v = 82 Volts i = 50 Amps

What is the conductance G? G = ?? S (siemens)

Answer: .61 ✓

Calculated question.

The correct answer is: 0.6098

Correct

Marks for this submission: 10.00/10.00.

Question 6

Correct

Mark 10.00 out of 10.00

C4

A resistor is a passive circuit element. Resistors can only (absorb/deliver) power.

Answer: absorb ✓

Resistor can only absorb power.

The correct answer is: absorb

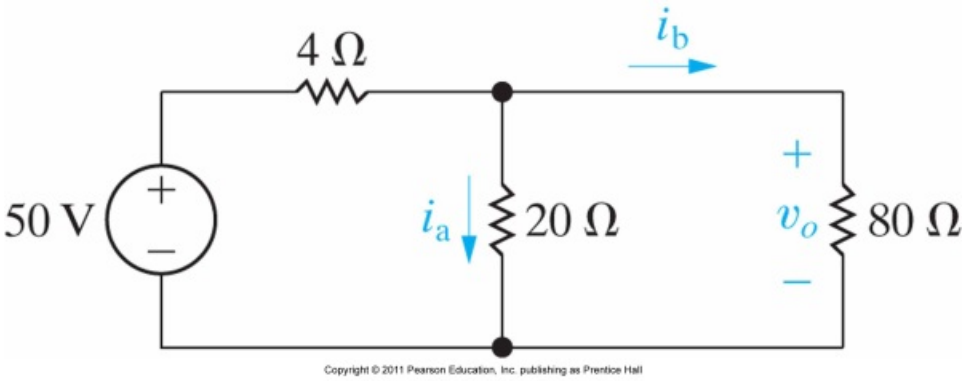
Correct

Marks for this submission: 10.00/10.00.

Question 7

Correct

Mark 10.00 out of 10.00



P2.19_9ed

a) Find the value of i_a. i_a = 2 ✓ A

b) Find the value of v_0. v_0 = 40 ✓ V

c) Find the power dissipated in each resistor.

$P_{4\Omega}$ = 25 ✓ W $P_{20\Omega}$ = 80 ✓ W $P_{80\Omega}$ = 20 ✓ W

d) Find the power delivered by the 50V source.

P_{50V} = -125 ✓ W "-" = Delivering "+" = Absorbing

Numeric Answer

i_a = 2 A

v_0 = 40 V

$P_{4\Omega}$ = 25 W $P_{20\Omega}$ = 80 W $P_{80\Omega}$ = 20 W

P_{50V} = -125W

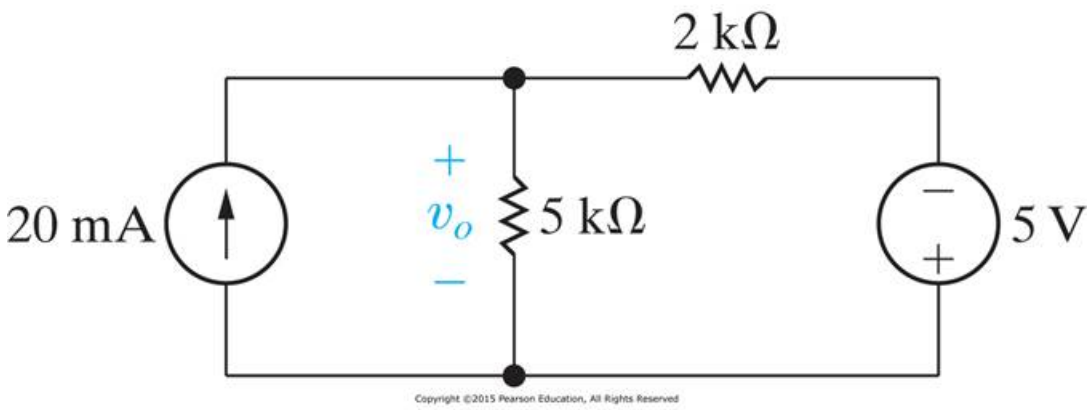
Correct

Marks for this submission: 10.00/10.00.

Question 8

Correct

Mark 10.00 out of 10.00



P2.17_10ed

Find v_0 using Kirchhoff's Laws and Ohm's Law. v_0 = ?? V

Answer: 25

Numeric Answer

v_0 = 25 V

The correct answer is: 25

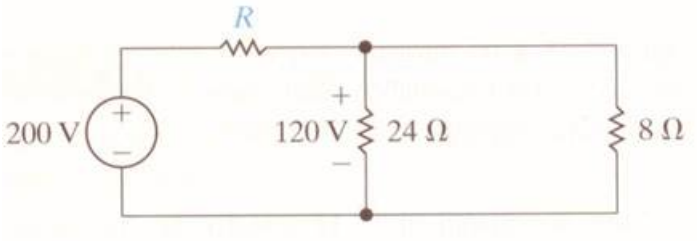
Correct

Marks for this submission: 10.00/10.00.

Question 9

Correct

Mark 10.00 out of 10.00



AP2.06_9ed

Use Ohm's Law and Kirchhoff's laws to find the value of R in this circuit. R = ?? Ω (Ohm)

Answer: 4

Numeric Answer

R = 4.0 Ω (Ohm)

The correct answer is: 4

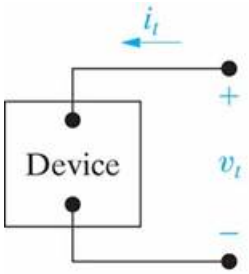
Correct

Marks for this submission: 10.00/10.00.

Question 10

Correct

Mark 10.00 out of 10.00



(a)

v_t (V)	i_t (A)
100	0
120	4
140	8
160	12
180	16

(b)

P2.14_9ed

The voltage and current were measured at the terminals of the device as shown in the table (b).

What is the value of the current source and resistor known to make up the device?

Current Source i = 20 ✓ A

Resistor R = 5 ✓ Ω (Ohm)

Numeric Answer

Current Source i = 20 A
Resistor R = 5 W (Ohm)

Correct

Marks for this submission: 10.00/10.00.