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Courses » Basic Electronics

Announcements

Course

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Unit 2 - Week 1

Course outline

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Week 1

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- Week 1 Slides PDF
- Quiz : Assignment 1
- Assignment-1 Solutions
- Download Videos
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Week 2

Week 3

Week 4

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Week 6

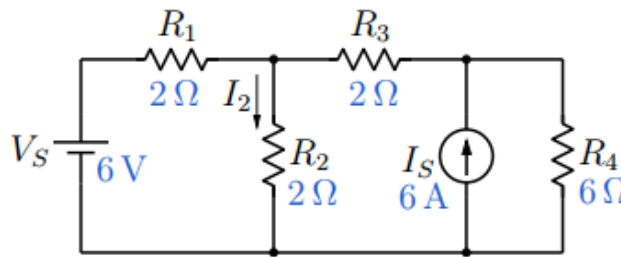
Week 7

Week 8

Assignment 1

The due date for submitting this assignment has passed. **Due on 2018-02-05, 23:59 IST**
As per our records you have not submitted this assignment.

1) In the circuit shown in the figure, we want to obtain I_2 using superposition. What is I_2 when **1 point** V_S is included and I_S deactivated?



- $\frac{1}{3} A$
- $\frac{4}{3} A$
- $\frac{3}{4} A$
- $\frac{3}{2} A$

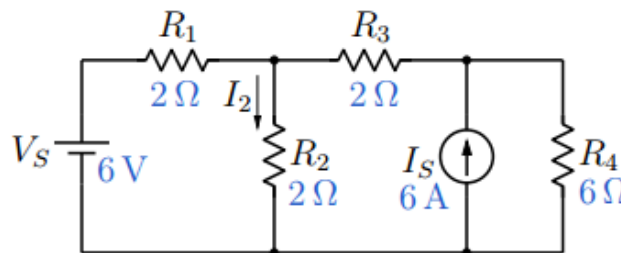
No, the answer is incorrect.

Score: 0

Accepted Answers:

$\frac{4}{3} A$

2) For the circuit of Q-1, what is I_2 when I_S is included and V_S deactivated? 1 point



- 2A
- $\frac{5}{2} A$

- Week 9
- Week 10
- Week 11
- Week 12

3A

$\frac{3}{2}A$

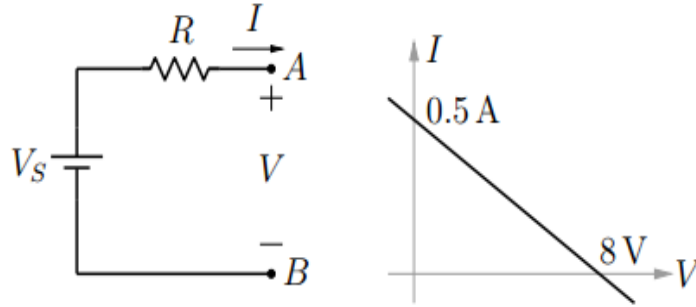
No, the answer is incorrect.

Score: 0

Accepted Answers:

2A

3) The figure shows a circuit along with the relationship between the current I and the voltage V . If the resistance $R = 8\Omega$ is connected between A and B , it would draw a current of



- 0.25A
- 0.33A
- 0.125A
- 0.67A

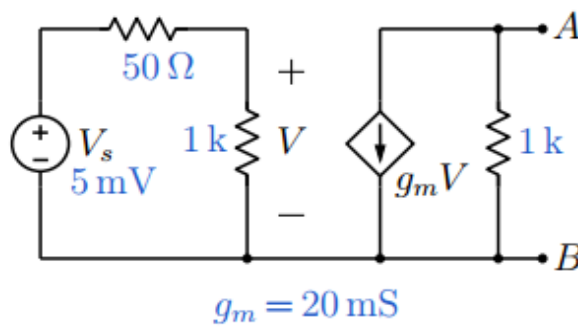
No, the answer is incorrect.

Score: 0

Accepted Answers:

0.33A

4) In the circuit shown in the figure, what is the magnitude of the Thevenin voltage as seen from AB ? 1 point



- 45.5mA
- 75.6mA
- 110mV
- 95.2mV

No, the answer is incorrect.

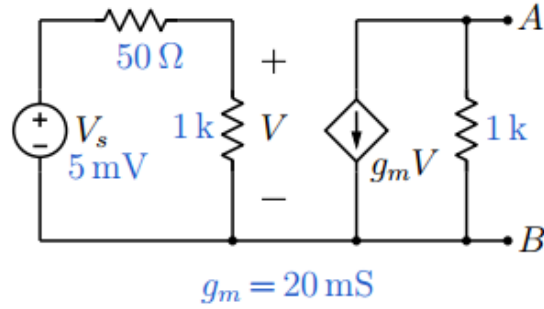
Score: 0



Accepted Answers:
95.2mV

5) In the circuit of Q-4, what is the Thevenin resistance as seen from AB?

1 point



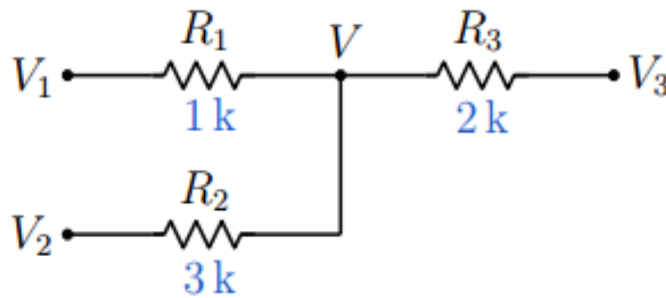
- 0.5Ω
- 49Ω
- 1kΩ
- 2kΩ

No, the answer is incorrect.
Score: 0

Accepted Answers:
1kΩ

6) The voltage V in the figure is given by $V = k_1 V_1 + k_2 V_2 + k_3 V_3$. The constant k_1, k_2, k_3 are, respectively,

1 point



- $\frac{3}{11}, \frac{2}{11}, \frac{6}{11}$
- $\frac{3}{11}, \frac{1}{11}, \frac{6}{11}$
- $\frac{6}{11}, \frac{2}{11}, \frac{3}{11}$
- $\frac{3}{11}, \frac{4}{11}, \frac{6}{11}$

No, the answer is incorrect.
Score: 0

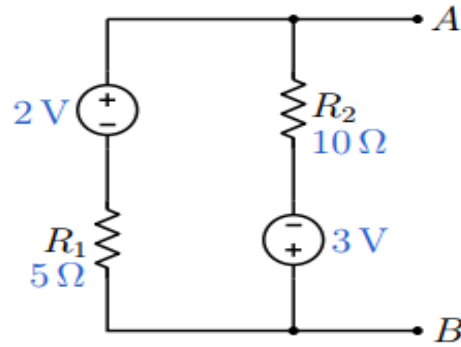
Accepted Answers:
 $\frac{6}{11}, \frac{2}{11}, \frac{3}{11}$

7)

1 point



For the circuit shown in the figure, what is the Thevenin voltage seen from AB ?



- $-0.8V$
 $-1V$
 $1.5V$
 $0.33V$

No, the answer is incorrect.

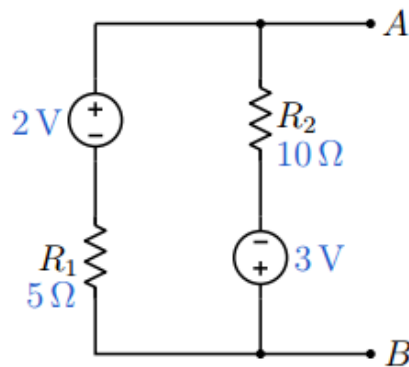
Score: 0

Accepted Answers:

$0.33V$

8) In the circuit of Q-7, what is the Thevenin resistance as seen from AB ?

1 point



- $15\ \Omega$
 $3.33\ \Omega$
 $6.7\ \Omega$
 $10\ \Omega$

No, the answer is incorrect.

Score: 0

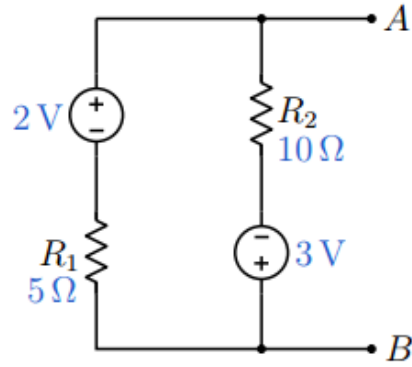
Accepted Answers:

$3.33\ \Omega$



9) What is the maximum power available from the network of Q-7?

1 point



- 75 mW
 8.3 mW
 120 mW
 24.6 mW

No, the answer is incorrect.

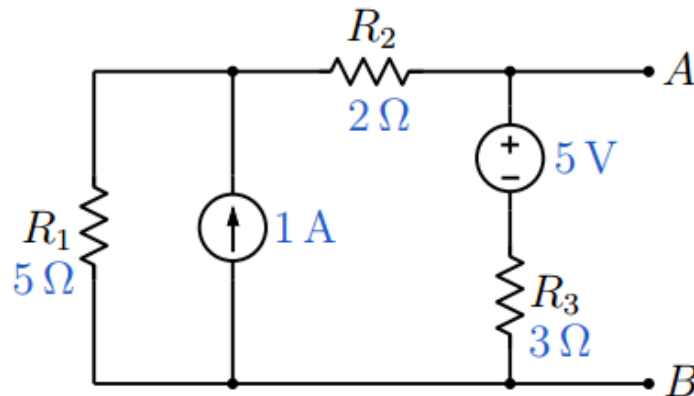
Score: 0

Accepted Answers:

8.3 mW

10) In the circuit shown in the figure, what is the Thevenin resistance as seen from AB?

1 point



- 10 Ω
 4.8 Ω
 2.5 Ω
 2.1 Ω

No, the answer is incorrect.

Score: 0

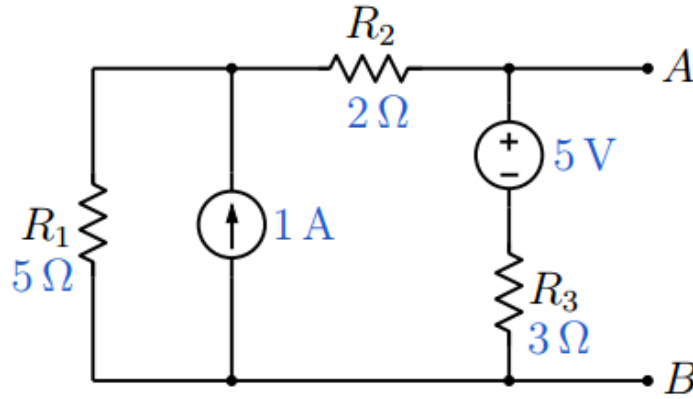
Accepted Answers:

2.1 Ω

11)

1 point

In the circuit of Q-10, what is the Norton current I_N as seen from AB ?



- 2.4 A
- 1.8 A
- 3.5 A
- 4.2 A

No, the answer is incorrect.

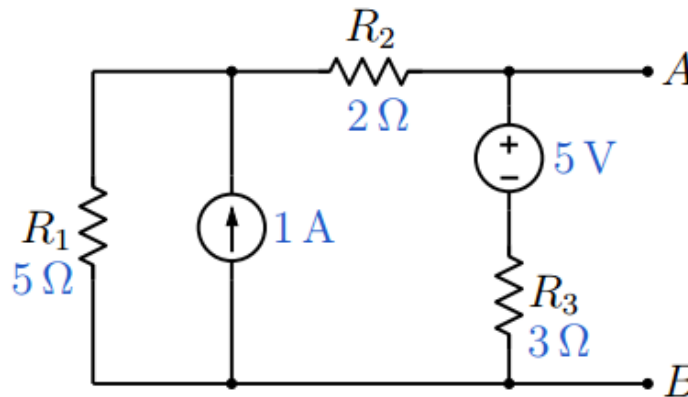
Score: 0

Accepted Answers:

2.4 A

12) What is the maximum power available from the network of Q-10?

1 point



- 1.8 W
- 2.4 W
- 3 W
- 4.5 W

No, the answer is incorrect.

Score: 0

Accepted Answers:

3 W

13) The time-domain quantity corresponding to the phasor $X = 1 - j3$ is given by $A \cos(\omega t + \theta)$. A and θ are given by

1 point

-



$A = 2.24, \theta = -18.4^\circ$

$A = 3.16, \theta = 18.4^\circ$

$A = 0.32, \theta = 25.8^\circ$

$A = 3.16, \theta = -71.6^\circ$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$A = 3.16, \theta = -71.6^\circ$

14) The impedance presented by an inductor with $L = 6mH$ at a frequency $f = 2.5kHz$ is 1 point

$j47 \Omega$

$j68 \Omega$

$j94 \Omega$

$j126 \Omega$

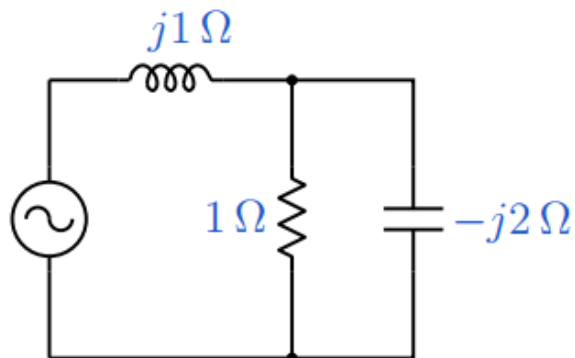
No, the answer is incorrect.

Score: 0

Accepted Answers:

$j94 \Omega$

15) In the circuit shown in the figure, what is the impedance seen by the source? 1 point



$0.8 + j0.6 \Omega$

$1 \angle 53^\circ \Omega$

$1 + j1.5 \Omega$

$1.4 \angle 37^\circ \Omega$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$0.8 + j0.6 \Omega$

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