

Unit 5 - Network Theorems -1

Course outline

How to access the portal

Unit 0

Basic Circuit Elements and Waveforms

Mesh and Node Analysis

Network Theorems -1

Linearity Property and Superposition Theorem

Source Transformation

Duality

Thevenin's Theorem 1

Thevenin's Theorem 2

Quiz : Assignment 3

Assignment 3 - Solution

Feedback form for week 3

Network Theorems -2

First Order and Second Order Circuits

Laplace Transform and its Application

Circuit Analysis Using Laplace Transform

Two Port Network

Sinusoidal Steady State Analysis - 1

Sinusoidal Steady State Analysis - 2

State Variable Analysis

Analogous Systems

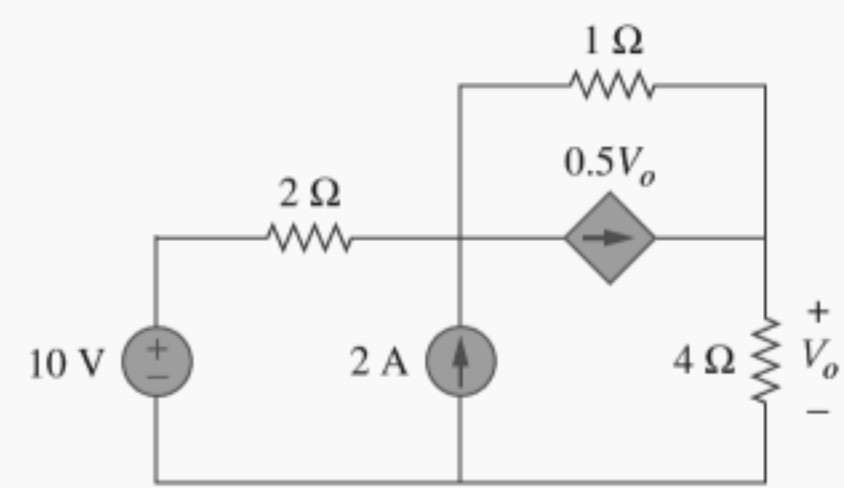
Assignment 3

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2019-08-21, 23:59 IST.

1)

Determine the value of V_0 in the given circuit using superposition theorem.



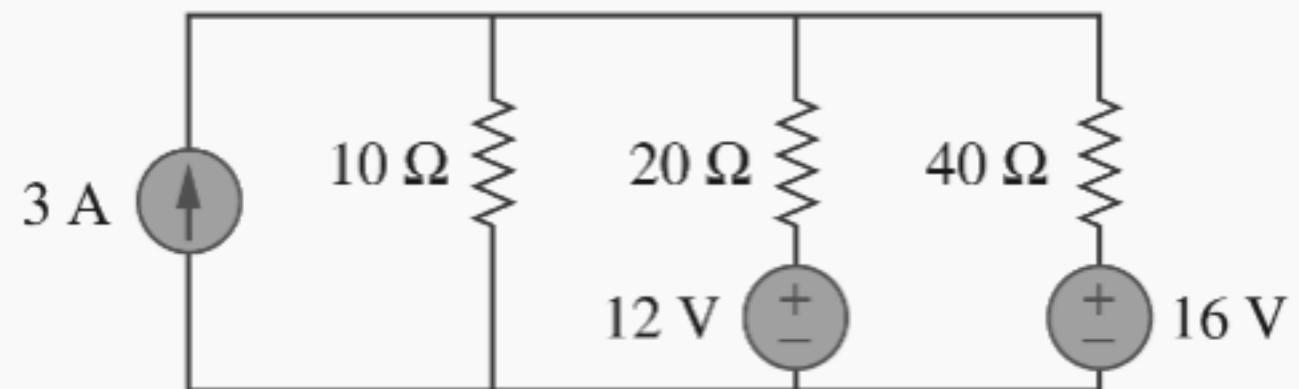
2 points

- 5.6 V
- 11.2 V
- 22.4 V
- 44.8 V

No, the answer is incorrect. Score: 0

Accepted Answers: 17.2 V

2) Using source transformation the following circuit needs to be reduced to a single voltage source in series with a single resistor. Determine the values of the final reduced voltage source and the resistor? 0 points



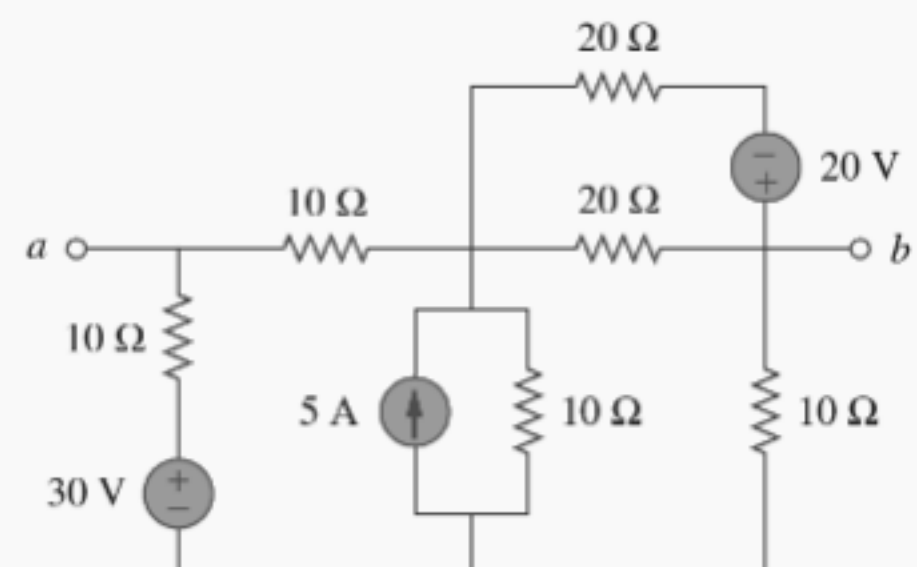
- 5.714Ω, 18.285V
- 5.714Ω, 9.14V
- 2.85Ω, 18.285V
- 2.85Ω, 9.14V

No, the answer is incorrect. Score: 0

Accepted Answers: 5.714Ω, 18.285V

3)

Determine the Thevenin resistance and voltage for the following circuit?



2 points

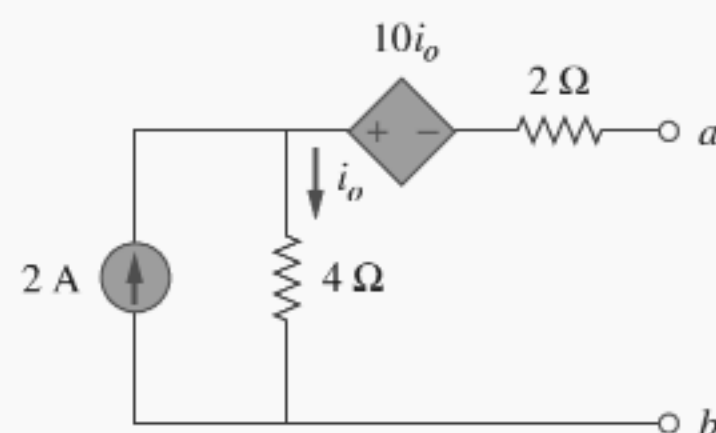
- 2.5Ω, 2.5V
- 5Ω, 5V
- 10Ω, 10V
- 20Ω, 20V

No, the answer is incorrect. Score: 0

Accepted Answers: 10Ω, 10V

4)

Determine the Thevenin resistance and voltage for the following circuit?



2 points

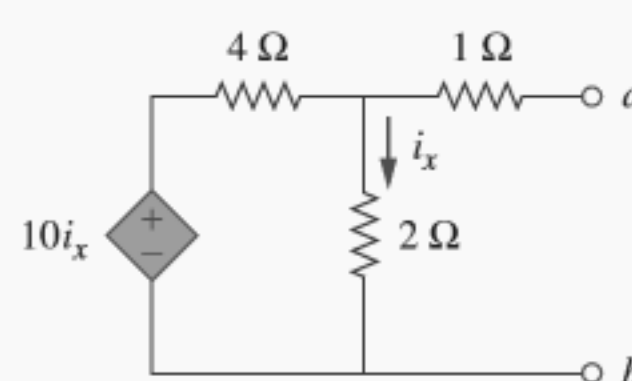
- 4Ω, 12V
- 4Ω, 12V
- 4Ω, -12V
- 4Ω, -12V

No, the answer is incorrect. Score: 0

Accepted Answers: -4Ω, -12V

5)

Determine the Thevenin resistance for the following circuit?



2 points

- 1Ω
- 1Ω
- 2Ω
- 2Ω

No, the answer is incorrect. Score: 0

Accepted Answers: -1Ω