

# Unit 6 - Network Theorems -2

## Course outline

How to access the portal

Unit 0

Basic Circuit Elements and Waveforms

Mesh and Node Analysis

Network Theorems -1

Network Theorems -2

Norton's Theorem 1

Norton's Theorem 2

Maximum Power Transfer Theorem 1

Maximum Power Transfer Theorem 2

Reciprocity and Compensation Theorem

Quiz : Assignment 4

Assignment 4 - Solution

Feedback form for week 4

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

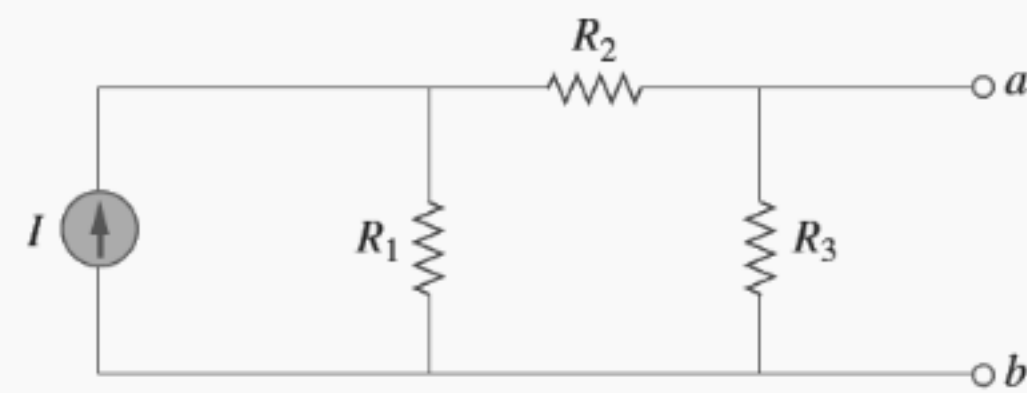
Analogous Systems

## Assignment 4

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

Due on 2019-08-28, 23:59 IST.

1) Determine the Norton current and resistance if  $R_1 = R_2 = 10\Omega$ ,  $R_3 = 20\Omega$ , and  $I = 4A$  for the circuit given below? 2 points

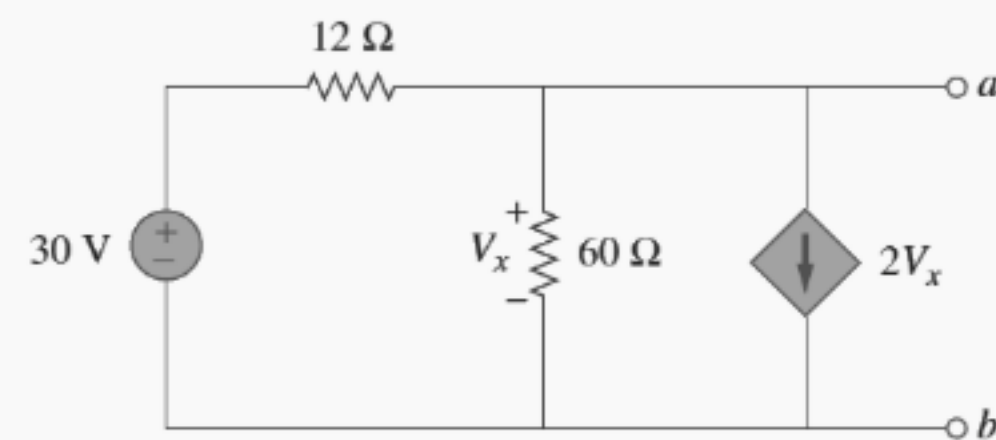


- 1A,  $10\Omega$
- 2A,  $20\Omega$
- 1A,  $20\Omega$
- 2A,  $10\Omega$

No, the answer is incorrect. Score: 0

Accepted Answers: 2A,  $10\Omega$

2) Obtain the Norton current with respect to terminals a and b for the following circuit? 2 points

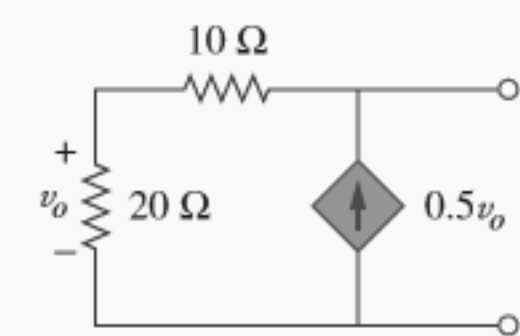


- 1.25A
- 2.5A
- 5A
- 10A

No, the answer is incorrect. Score: 0

Accepted Answers: 2.5A

3) Find the Norton equivalent for the below circuit? 2 points

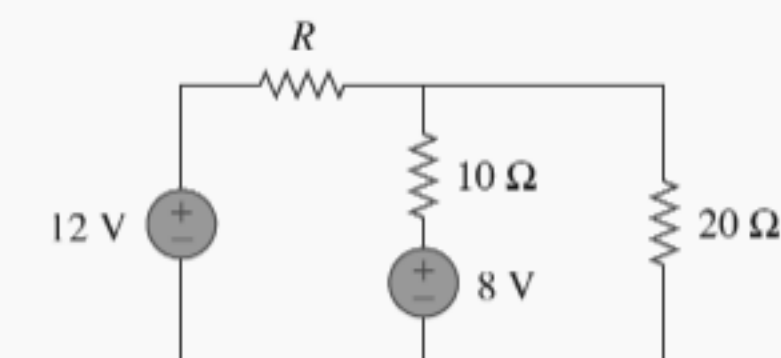


- $-3.33\Omega$
- $3.33\Omega$
- $-6.66\Omega$
- $6.66\Omega$

No, the answer is incorrect. Score: 0

Accepted Answers:  $-3.33\Omega$

4) Compute the value of R that results in maximum power transfer to the  $10\Omega$  resistor? 2 points

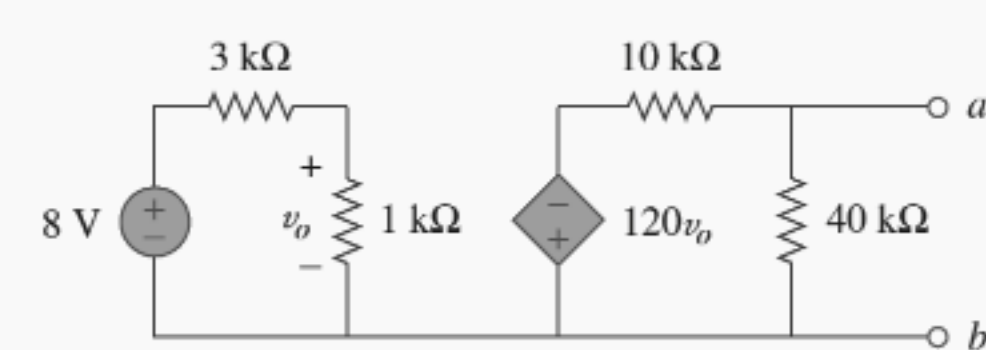


- $20\Omega$
- $10\Omega$
- $5\Omega$
- $0\Omega$

No, the answer is incorrect. Score: 0

Accepted Answers:  $0\Omega$

5) Determine the maximum power absorbed by the resistor connected across terminals a and b for the circuit shown below? 2 points



- 4.6W
- 2.3W
- 1.15W
- 0W

No, the answer is incorrect. Score: 0

Accepted Answers: 1.15W