

Drawing Schematic using GSchem

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Talk to a Teacher Project
<http://spoken-tutorial.org>
National Mission on Education
through ICT (NME-ICT)
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Learning Objectives

After completing this tutorial you will be able to –

- Create a circuit schematic using GSchem



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After completing this tutorial you will be able to –

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- Generate the netlist from it for simulation using Ngspice



System Requirements

- Snapshot Version of Zenwalk GNU Linux



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- Snapshot Version of Zenwalk GNU Linux
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- gEDA Suite Version 1.7.2 available at geda-project.org



System Requirements

To install gEDA Suite use –

- Xnetpkg in Zenwalk



System Requirements

To install gEDA Suite use –

- Xnetpkg in Zenwalk
- Software Centre in Ubuntu



Prerequisites

- Circuit Theory



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- Analog and Digital Electronics



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- Analog and Digital Electronics
- Skills in operating GNU Linux systems

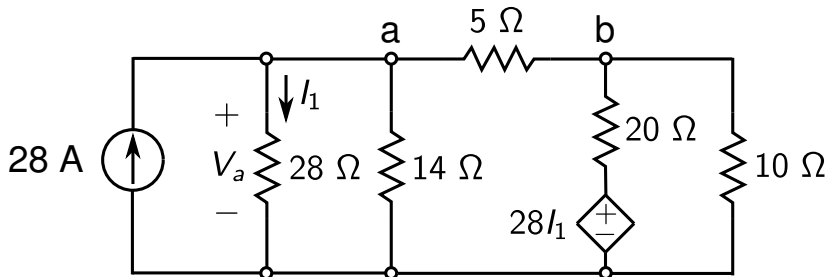


Prerequisites

- Circuit Theory
- Analog and Digital Electronics
- Skills in operating GNU Linux systems
- Basics of SPICE



Problem for Simulation

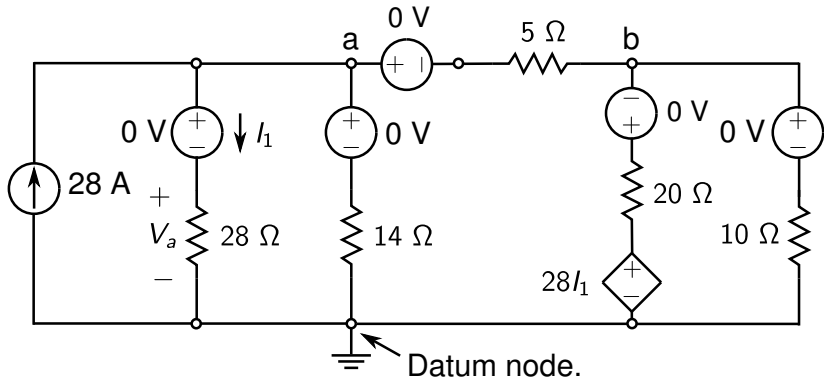


Find V_a and power delivered by controlled source.
Also verify KVL and KCL.



Circuit Modified for Simulation

Dummy voltage sources connected to measure current.



Summary

In this tutorial we have learnt

- How to create a circuit schematic using GSchem



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- How to create a circuit schematic using GSchem
- How to generate the netlist from it for simulation using Ngspice



Assignment

If 200 V at 50 Hz is applied to a coil of $R_1 = 15 \, \Omega$ and $L_1 = 0.05 \, \text{H}$, in parallel with $R_2 = 20 \, \Omega$, find

- the current in all the branches,
- phase angle of the impedance of the parallel combination

Ans: 9.2 A, 10 A; 17.6 A; 22 Deg.



About Spoken Tutorial Project

- Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- It summarises the Spoken Tutorial project
- If you do not have good bandwidth, you can download and watch it



Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates to those who pass an online test
- For more details, contact contact@spoken-tutorial.org



Acknowledgement

- Spoken Tutorial Project is a part of the Talk to a Teacher project
- It is supported by the National Mission on Education through ICT, MHRD, Government of India
- More information on the same is available at:

<http://spoken-tutorial.org/NMEICT-Intro>



About the Contributor

This is R S Ananda Murthy from
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signing off

Thank you for joining.

