

Dr. Mohamed Bakr, EE2C15, 2007

Note Title

9/23/2007

Lecture 7

From Section 3.1 of Textbook

Solve E3.3 - E3.7, 3.25, 3.30,

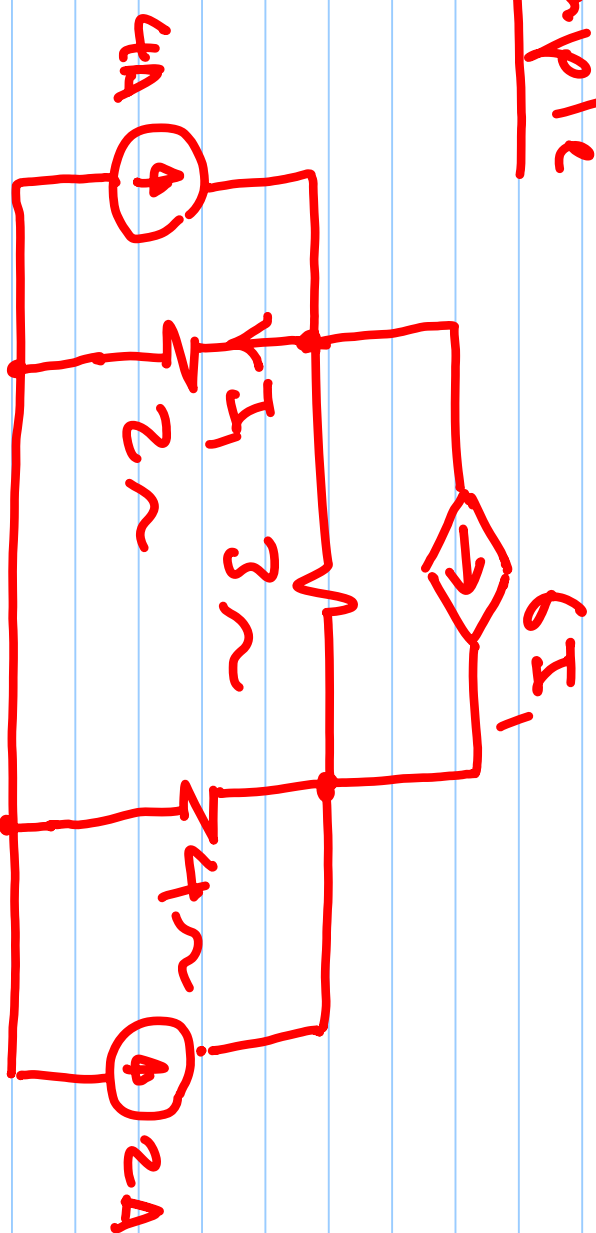
3.37, 3.41, 3.44, 3.53, 3.55, 3.58

Circuits Containing CCCs or VCCs

* Circuits containing dependent current sources can be analyzed in a similar way

* The controlling parameter is expressed in terms of the nodal voltages

Example

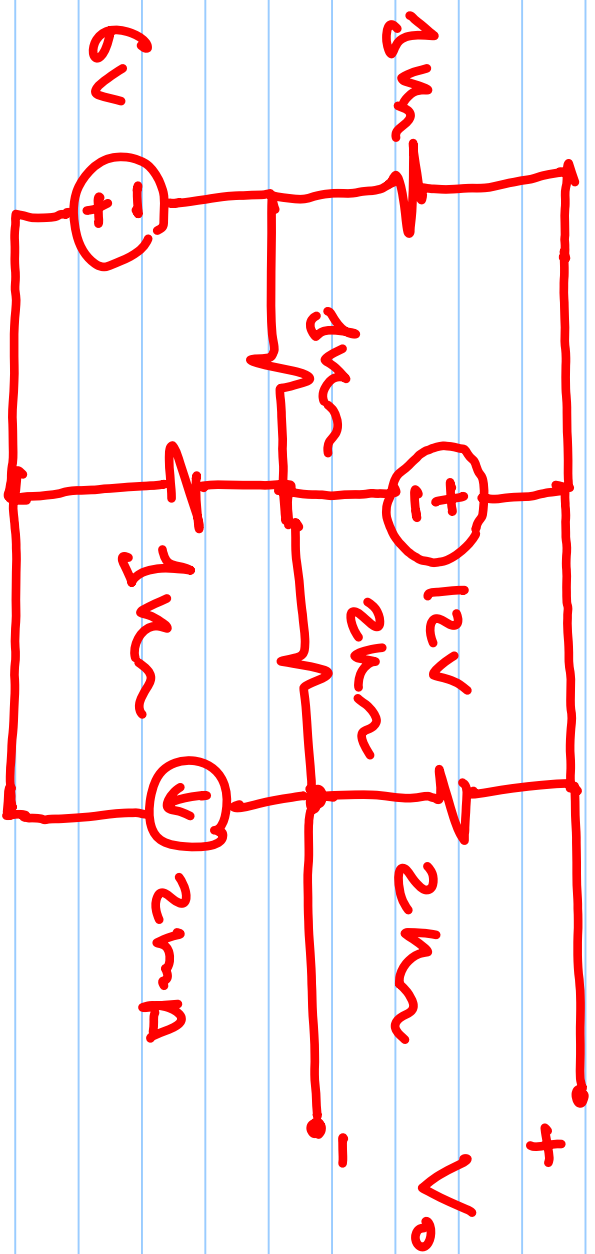


Using Nodal analysis, find the voltages of all nodes

Circuits with Independent Voltage Sources

- * Independent Voltage Sources usually reduce the number of unknowns
- * Their presence may require applying KCL to supernodes (a surface enclosing more than one node)

Example



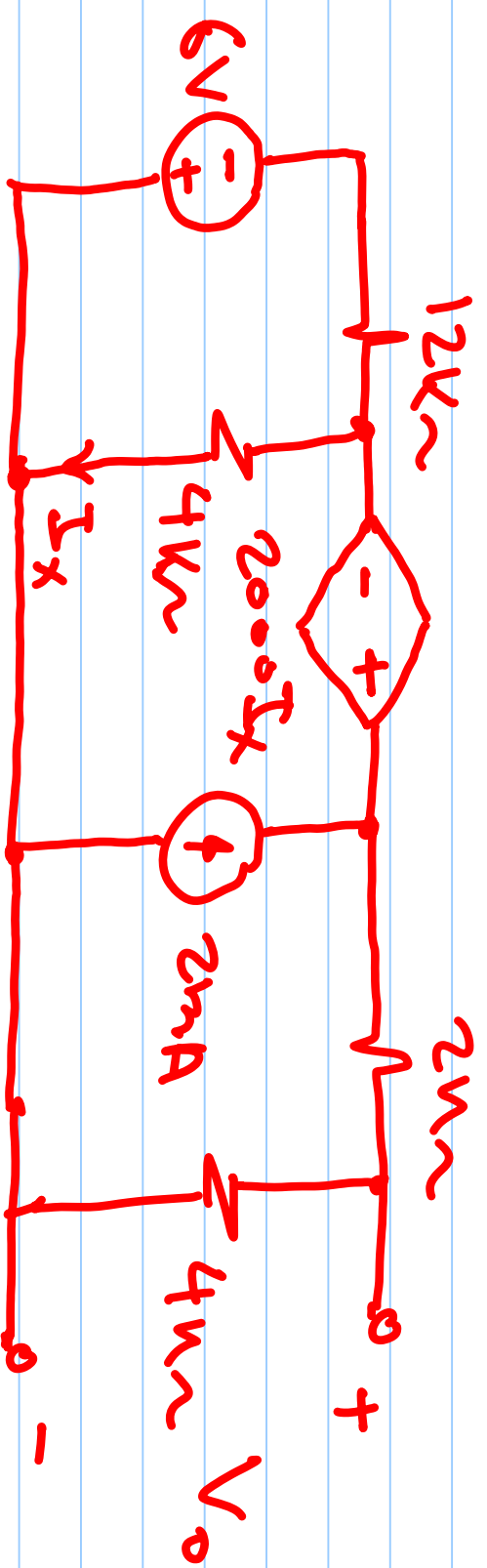
Find V_o using Nodal analysis

Circuits with CCVs and VCVs

* Controlling variables should be expressed of unknown nodal voltages

* Supernodes may be used to apply KCL

Example



Find V_o using nodal analysis

