

University of California
College of Engineering
Department of Electrical Engineering
and Computer Sciences

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Problem Set 2
Due Tuesday June 11th at 6pm

EE40
Summer 2006

Reading:

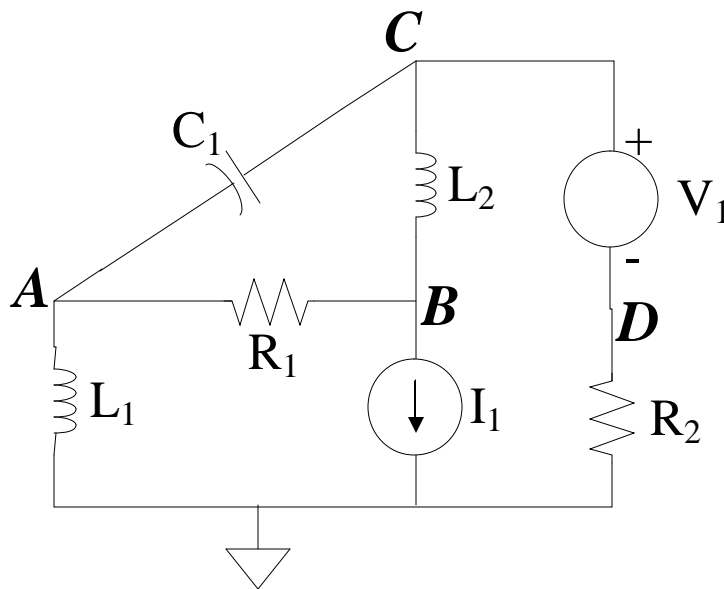
Chap 2, Chap 3 of Hambley 3rd Edition

Problems:

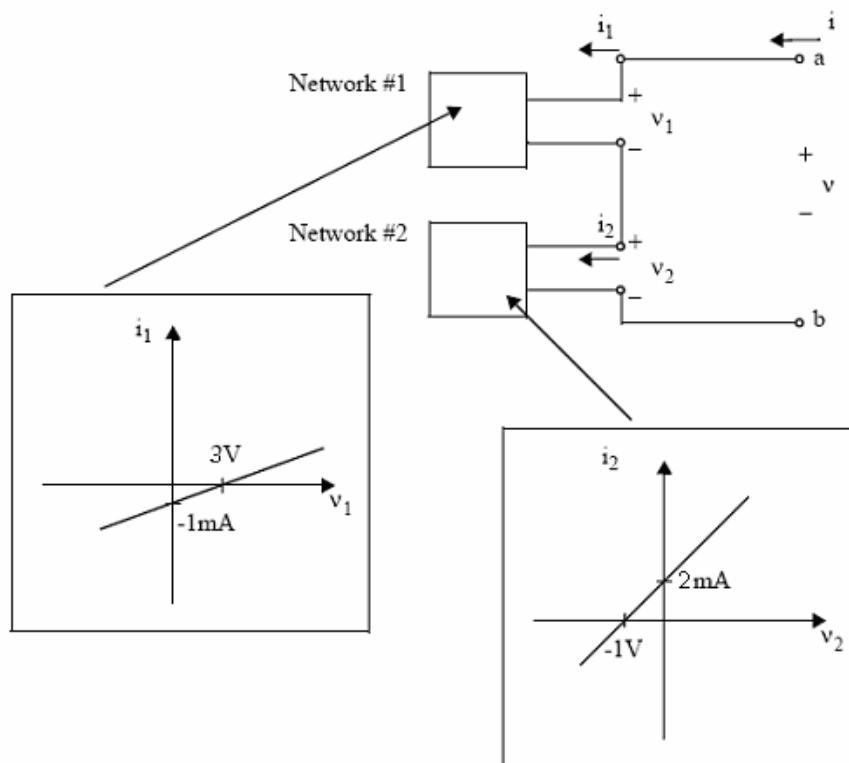
Chap 2: 2.46, 2.49, 2.51, 2.61, Solve 2.46 using mesh analysis, 2.66, 2.72, 2.81, 2.85, Solve for v_1 and v_2 using superposition in 2.47

Chap 3: 3.10, 3.19, 3.25, 3.43, 3.58

1) Using KVL or KCL, find the 4 differential equations necessary to fully characterize the behavior of the circuit shown below. DO NOT SOLVE THE EQUATIONS, simply write them down.



2) Plot the i - v characteristics of the network between nodes a and b .



3) Find and draw the Norton Equivalent of the circuit shown above. Give answers only in terms of V_1 , R_1 , R_2 and G_m . Draw the i - v characteristics of this circuit.

