

Inter American University of Puerto Rico
Bayamón Campus
School of Engineering
Department of Electrical Engineering

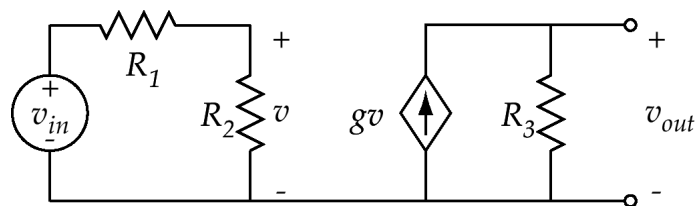
ELEN 3301 – Electric Circuits I

Problem Set 4

Due Wednesday, September 22

Reminder: Quiz 1 will be offered Wednesday, September 22 and will cover material given in class until September 8.

Problem 1: Refer to the network shown below for all parts of this problem:

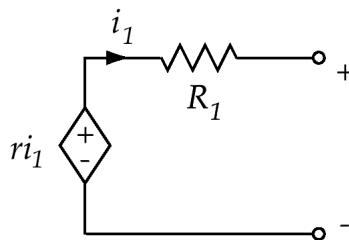


(A) Find v_{out} .

(B) Find the Thevenin equivalent circuit looking into the v_{out} terminals.

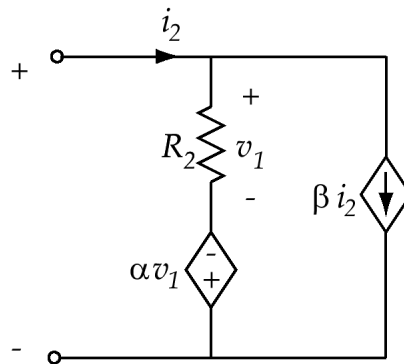
Problem 2:

(A) Find the Thevenin equivalent circuit looking into the marked terminals of the circuit below:



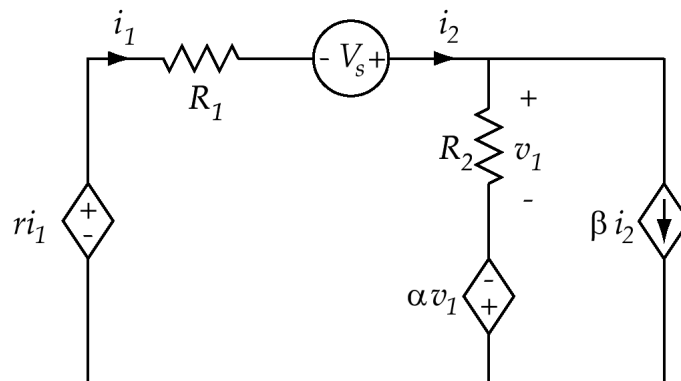
What is the Thevenin equivalent circuit if $r = R_1$? Explain.

- (B) Find the Thevenin equivalent circuit looking into the marked terminals of the circuit below:



What is the Thevenin equivalent circuit if $\beta = 1$? Explain.
 What is the Thevenin equivalent circuit if $\alpha = 1$? Explain.

- (C) The networks shown above are connected to a floating voltage source as shown below:



Find i_2 .