

ELG2136

Winter 2013

Assignment 3

Posting Date: Thursday, January 24, 2013

**Electronic submission ONLY via WebCT (the blackboard)
OTHER FORMS OF SUBMISSION WILL NOT BE
ACCEPTED.**

General instructions

- 1. All circuit drawings may be done using a specialized software package. You can use Microsoft Visio2010 or Visio2007 which is available on PCs in different labs, or can be downloaded for free from the [MSDNAA web site https://msdn06.e-academy.com/uoo](https://msdn06.e-academy.com/uoo) ite. There are also templates for all circuit elements that can be downloaded from the resource center in your WebCT accounts. These templates have been especially designed to make the drawing task much easier and save you time.**
- 2. Your equations and solutions may be hand-written, scanned into a PDF format.**
- 3. Once you have a PDF file for your entire assignment you can upload it to the WebCT on your virtual campus account before the deadline.**
- 4. A hard copy submission of your assignment is also necessary. Special instructions on how and where to submit your hard copy will be sent to you by e-mail shortly.**
- 5. A bonus mark of 20 % of the actual mark will be added if the assignment solution is done using Visio and if all the equations are typed using a suitable word processor, such as Microsoft Word or LaTeX.**

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The diodes in the circuit shown in Figure 1 are ideal diodes. Plot the relation between v_{out} versus v_{in} .

Assume $R_1 = R_3 = 2\text{k}\Omega$, and $R_2 = 1\text{k}\Omega$, $E = 2\text{V}$.

IMPORTANT

You **MUST** show clearly on your plot the exact coordinates of all the break points and the exact slopes of each linear segment in your graph. A graph lacking this information will not be marked.

You **MUST** also use the graph area provided below to sketch the relation you find.

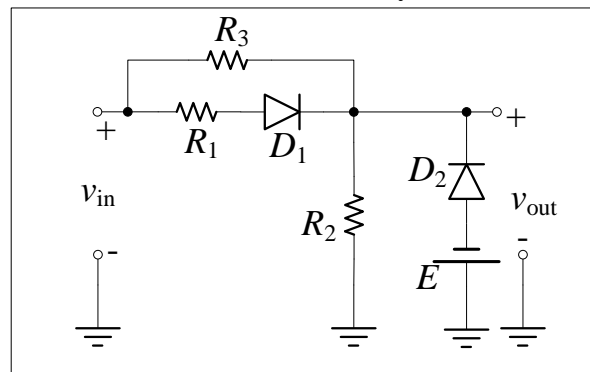


Figure 1

