

ECE 301
Fall Semester, 2002
HW Set #2

Due: September 12, 2002
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Name _____
Print (last, first)

You should work all of the following problems from the text. The problems with an asterisk are to be turned in for grading. Use engineering paper. Work only on one side of the paper. Use this sheet as your cover sheet, placed on top of your work and stapled in the top left-hand corner. Number the problems at the top of the page, in the center of the sheet. Do neat work. **Underline your answers. Show how you got your equations.** Each problem counts 10 points. **Be sure to show how you got your answers.**

$$3.3 \quad i_1 = -0.5 \text{ A}, \quad i_2 = -0.5 \text{ A}$$

$$3.7 \quad v_1 = 1.125 \text{ V}, \quad v_2 = 0.75 \text{ V}, \quad I = 3.75 \text{ A}$$

* **3.14** $i_a = 127.5 \text{ mA}, \quad I_b = -67.8 \text{ mA}, \quad I_c = 41.6 \text{ mA}, \quad V_{R4} = -1.09 \text{ mV}$

* **3.20** $A_c = -0.04$

$$3.21 \quad V_{R1} = 429.5 \text{ V}, \quad V_{R2} = -422.2 \text{ V}, \quad V_{R3} = 852 \text{ V}$$

* **3.33** $V_R = 5.99 \text{ v}$

$$3.48 \quad R_T = 52 \text{ ohms}, \quad V_{os} = 12.8 \text{ V}, \quad I_{sc} = 246 \text{ mA}$$

$$3.5 \quad 1 \text{ voltage decreases by } 16.33 \text{ V}$$

$$3.54 \quad R_{eq} = 188.2 \text{ ohms}$$

* **3.55** (a) $R_{TH} = R_{EQ} = 0.288 \text{ ohms}, \quad$ (b) $V_{TH} = 11.37 \text{ v}$