ECE 1050 / 60  homework # 4  Due:  Tue, 9/9/03

Answer the following problems on your own paper. Since you have the answers, you must show your equations and work to get credit.

**Superposition**

1. Use superposition to find $I_3$. Circle your intermediate solutions on your paper. Your intermediate solutions show how much of $I_3$ is due to $V_A$, and how much is due to $V_B$.

2. Use superposition to solve following problems: Each problem asks for both a current and a voltage. Clearly indicate your intermediate answers, the grader will look for those.

   a) \[ R_1 := 40 \cdot \Omega \quad V_a = ? \]

   b) \[ R_2 := 22 \cdot \Omega \quad I_{R2} = \quad I_S := 0.3 \cdot \text{A} \]

   c) Watch your signs.

**Answers**

1. \[ 2 \cdot \text{mA} + 5 \cdot \text{mA} = 7 \cdot \text{mA} \]

2. a) \[ 4.2 \cdot \text{V}, \ 20 \cdot \text{mA} \]
   b) \[ 8.86 \cdot \text{V}, \ 143 \cdot \text{mA} \]
   c) \[ 0.5 \cdot \text{V}, \ -0.5 \cdot \text{mA} \]