ECE 1050 / 60  homework # 4  Due: Fri, 1/30/04

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 $b$. Circle your intermediate solutions on your paper. Your intermediate solutions show how much of $\tilde{b}$ 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.

   a) $R_1 := 40 \cdot \Omega$  
      $V_a = ?$  
      $I_{R1} = ?$  
      $R_2 := 120 \cdot \Omega$  
      $R_3 := 120 \cdot \Omega$  
      $V_{S1} := 5 \cdot V$  
      $V_{S2} := 6 \cdot V$  

   b) $R_1 := 22 \cdot \Omega$  
      $R_2 := 20 \cdot \Omega$  
      $I_{R2} = ?$  
      $I_s := 0.3 \cdot A$  
      $V_{R1} = ?$  
      $V_s := 12 \cdot V$  

   c) Watch your signs.

   **Answers**

   1. $2 \cdot mA + 5 \cdot mA = 7 \cdot mA$
   2. a) $4.2 \cdot mA$, $20 \cdot mA$  
       b) $8.86 \cdot V$, $143 \cdot mA$
       c) $0.5 \cdot V$, $-0.5 \cdot mA$

Turn over, HW #5 on back --->