1. a. Using Kirchoff's Current Law, write an equation relating $I_1$, $I_2$, $I_3$, $I_4$, and $I_5$.
   b. Using the equations for current division, determine the values for $I_2$, $I_3$, $I_4$, and $I_5$.

2. a. Sketch three loops in the schematic that can be formed in the circuit below.

   b. Using Kirchoff's Voltage Law, write the equations that relate voltage rises and voltage drops using the labels for the voltages across resistors shown below.
   c. Using the equations for voltage division, determine the values for $V_1$, $V_2$, $V_3$, $V_4$, and $V_5$. 

   ![Circuit Diagram]