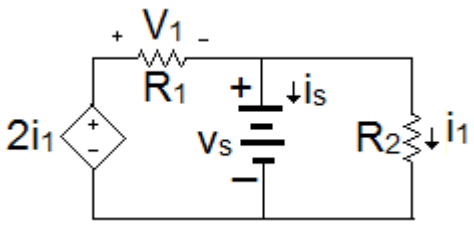
EE 210 **Name_____**
Hour Exam 1 **September 10, 2015**

1. In the circuit below $R_1 = R_2 = 1\Omega$ and $V_s = 3$ volts. Find the value of i_1, i_s, and V_1 in the circuit below. Show all of your work.

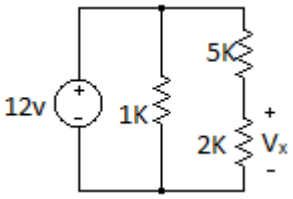


i_1 = _____

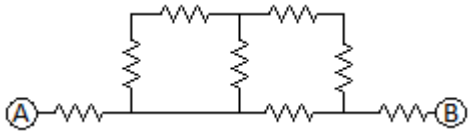
i_s = _____

V_1 = _____

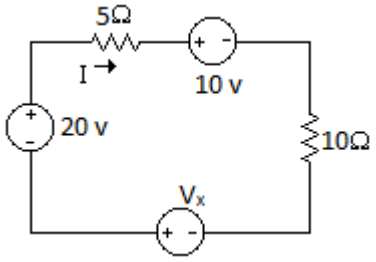
2. Use voltage division to find the value of V_x in the circuit below. Show your work.



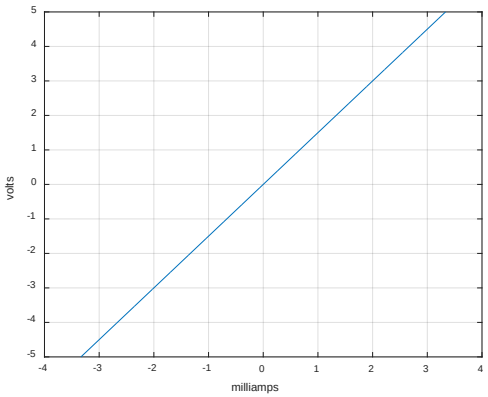
3. All of the resistors in the following circuit have a value of 1Ω. Find the value of the resistance between points A and B.



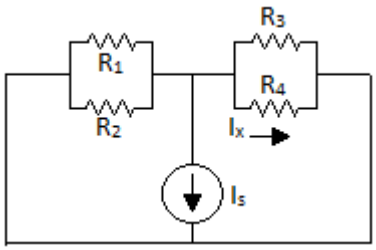
4. For the circuit below the value of I is 0.25 amps. Find the value of V_x.



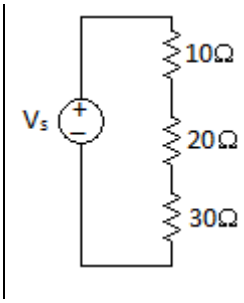
5. The graph below is a plot of voltage vs current for a resistor. What is the value of the resistance? Show your work



6. In the circuit below I_s = 10 ma, R_1 = 1K, R_2 = 4K, R_3 = 2K, and R_4 = 8K. Find I_x.



7. The power dissipated by the 10 Ω resistor is 5 watts. Find V_s.



8. Find i_0 in the following circuit.