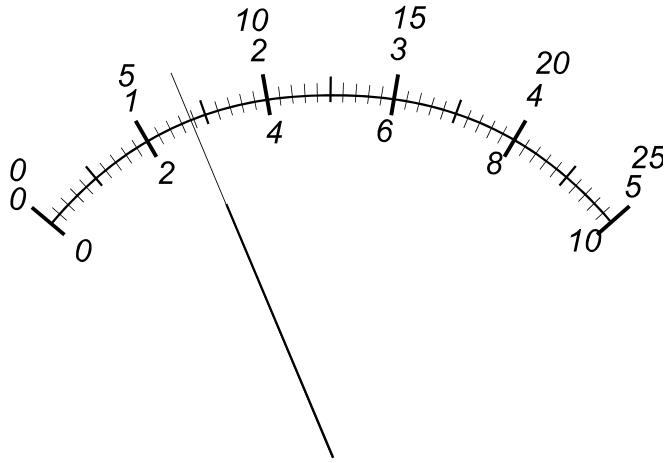
ELECTROTECHNOLOGY
ELTK1100
ASSIGNMENT #2

1. What is the value of the following D.C. Milliammeter reading if the selector switch is set on the following settings;

(a) 10
(b) 50
(c) 2.5
(d) 100

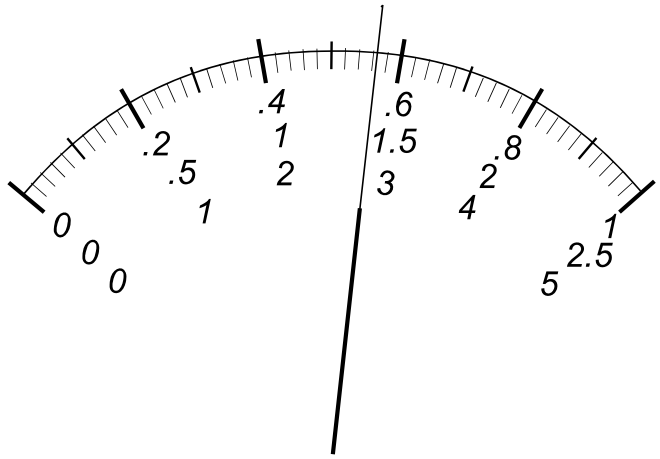


If this was an actual reading in the lab on 10mA scale (part **(a)**), can you do something to make the reading more accurate? If yes, what is it? If no, why?

Hint: On what area of the scale is the Ammeter reading most accurate?

2. What is the value of the following D.C. Voltmeter reading if the selector switch is set on the following settings;

(a) 5
(b) 250
(c) 10
(d) 2.5

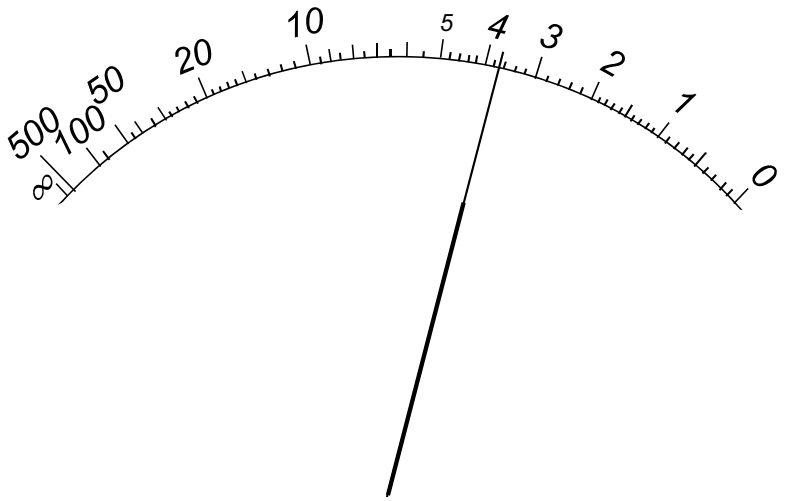


If this was an actual reading in the lab on 5V scale (part **(a)**), can you do something to make the reading more accurate? If yes, what is it? If no, why?

Hint: On what area of the scale is the Voltmeter reading most accurate?

3. What is the value of the following Ohmmeter reading if the selector switch is set on the following settings;

(a) Rx100
(b) Rx10K
(c) Rx10

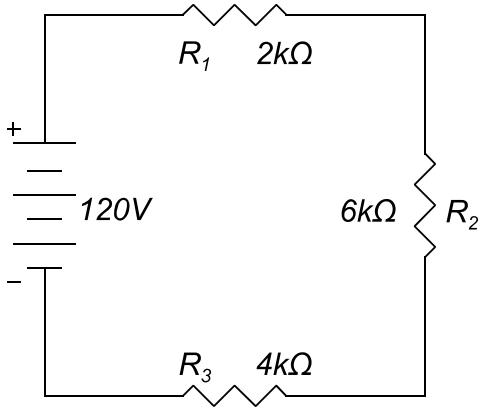


If this was an actual reading in the lab on Rx100 scale (part **(a)**), can you do something to make the reading more accurate? If yes, what is it? If no, why?

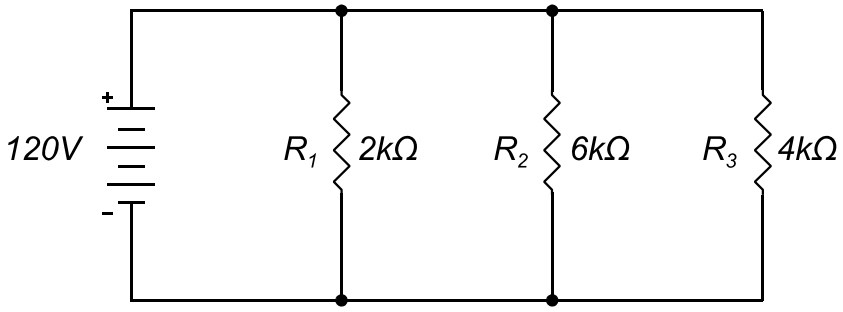
Hint: On what area of the scale is the Ohmmeter reading most accurate?

4. Calculate I_T, I_1, I_2, I_3, V_1, V_2 and V_3 for the following circuits.

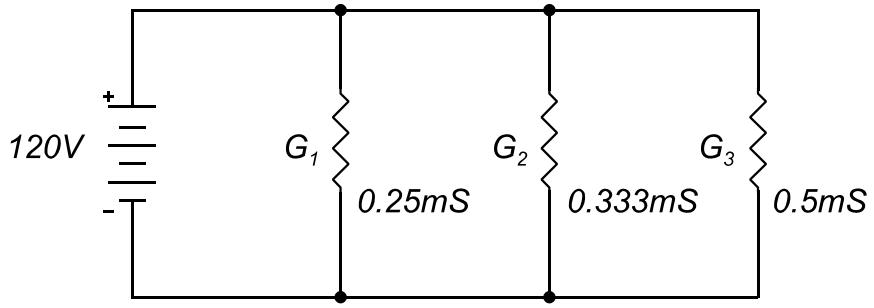
(a)



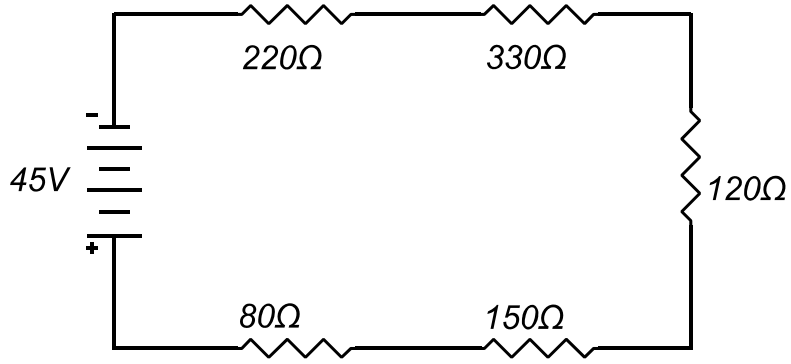
(b)



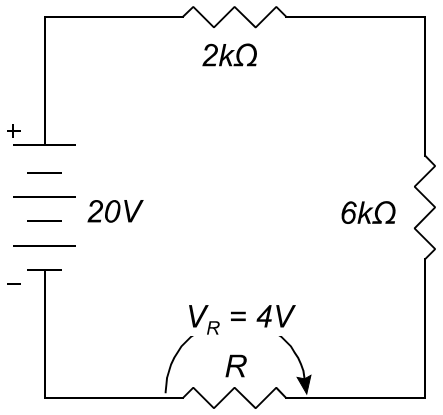
5. Calculate I_T for the following circuit;



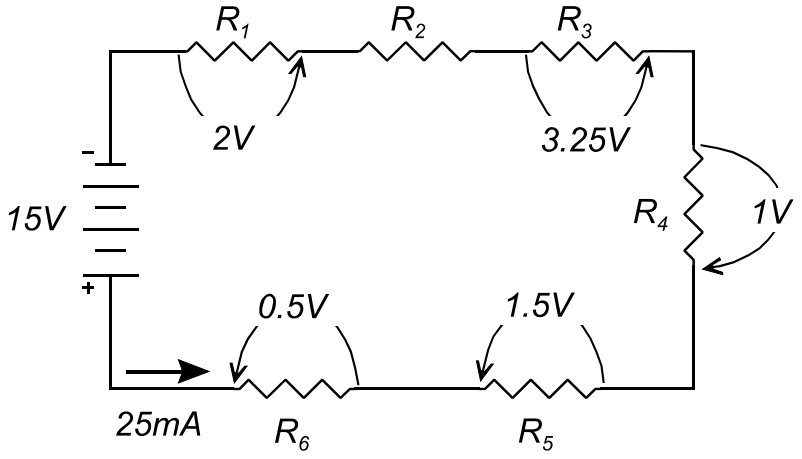
6. Calculate the voltage drops in the following circuit. **Do not calculate the current!** Use Voltage division.



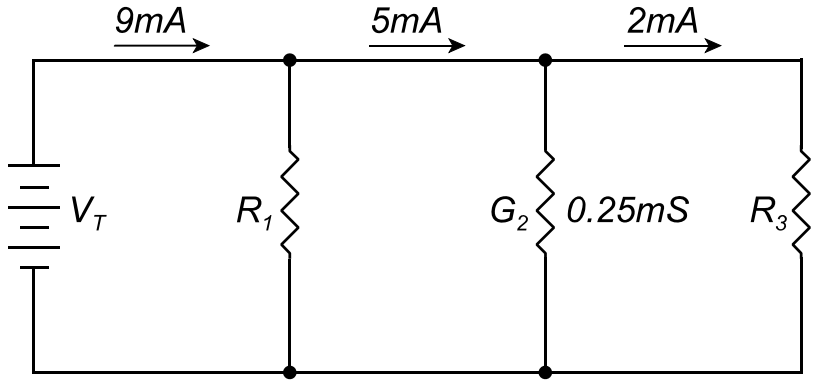
7. Determine R in the folowing circuit.



8. Determine the voltage drop of R_2 and all resistor values. Redraw the circuit showing what meters you would use and how you would connect them to measure the resistance, voltage and current of R_2.



9. Determine V_T and all resistor values.



10. Determine the current flowing through R_3, V_T and all resistor values if R_T = 773Ω. Redraw the circuit showing what meters you would use and how you would connect them to measure the resistance, voltage and current of R_3.