Title: **Ohms Law Calculations** Worksheet: 2

Course: Electrical Applications Unit: Electrical Theory CLO: 3

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade \_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

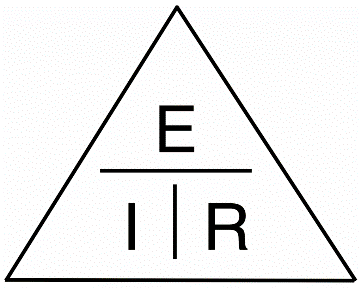
**Objectives**

1. Student shall calculate voltage, current and resistance when given two of the three properties.
2. Student shall contrast the difference between voltage, current and resistance.

**Assessment**

Students shall demonstrate a comprehension of the objectives listed above by scoring a minimum of 75% on this Worksheet. Grading shall be based on an answer key.

**Conventions**



Where;

E = Voltage in Volts (V)

I = Current in Amperes (A)

R = Resistance in Ohms (Ω)

**Instructions**

All answers will be in engineering units M, k, m, and μ. Answers will NOT be in powers of 10. Display at least 1 whole number and not more than 3 whole numbers to the left of the decimal, and round off to 3 decimal places to the right of the decimal.

1. E = 45V I = 725.807mA R = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. E = 62V I = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R = 44Ω
3. E = 10V I = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R = 162Ω
4. E = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ I = 66mA R = 104Ω
5. E = 40V I = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R = 178Ω
6. E = 17V I = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R = 146Ω
7. E = 76V I = 55mA R = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. E = 75V I = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R = 294Ω
9. E = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ I = 77mA R = 471Ω
10. E = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ I = 15mA R = 123Ω
11. The circuit current is 25mA and the source voltage is 6.25V.   
    What is the resistance of the circuit?
12. The circuit current is l0mA and the resistance is 2k ohms.   
    What is the source voltage?
13. The source voltage is 1.5V and the circuit current is 200μA.   
    What is the circuit resistance?
14. The source voltage is 5.5V and the circuit resistance is 5700 ohms.   
    What is the circuit current?
15. The circuit current is 12mA and the resistance is 4.5k ohms.   
    What is the source voltage?
16. The source voltage is 1.5V and the circuit resistance is 220 ohms.   
    What is the circuit current?
17. The source voltage is 1.2V and the circuit current is 25mA.   
    What is the circuit resistance?
18. The circuit current is 725μA and the source voltage is 1.5V.   
    What is the circuit resistance?
19. The circuit current is 1.025mA and the resistance is 2.2M ohms.   
    What is the source voltage?
20. The source voltage is 10V and the circuit current is 200mA.   
    What is the circuit resistance?