Student Activity Sheet 1-3

Ohm's Law Practice

Name Answer Key Score _____

Date _____ Class/Period/Instructor _____

The only way to master Ohm's law is with practice. The following problems are simple to solve. Th challenge of this exercise is to become familiar with how voltage, current, or resistance can be solved for whe two factors are known. All three forms of the Ohm's law formula are provided below.

$E = I \times R$	Used to find *voltage* (*E*) when current (*I*) and resistance (*R*) are known.
$R = E/I$	Used to find *resistance* (*R*) when voltage (*E*) and current (*I*) are known.
$I = E/R$	Used to find *current* (*I*) when voltage (*E*) and resistance (*R*) are known.

1. 10 volts	2 amperes	5 ohms
2. 2 ohms	6 volts	3 amps
3. 6 amps	12 volts	2 ohms
4. 2.4 ohms	12 volts	5 amps
5. 50 volts	5 amps	10 ohms
6. 2.4 amps	10 ohms	24 volts
7. 1.2 ohms	5 amps	6 volts
8. 3 volts	0.25 amps	12 ohms
9. 4 ohms	1.5 amps	6 volts
10. .12 amps	100 ohms	12 volts
11. 75 volts	25 ohms	3 amps
12. 72 volts	0.06 amps	1200 ohms
13. 1.22 volts	0.01 amps	122 ohms
14. 1200 ohms	0.005 amps	6 volts
15. 90 volts	1800 ohms	0.05 amps
16. 9.8 volts	1400 ohms	0.007 amps
17. .005 amps	18 volts	3600 ohms
18. .04 amps	24 volts	600 ohms
19. .01 amps	12 volts	1200 ohms
20. 32 volts	16 ohms	2 amps

Student Activity Sheet 1-4

Common Electrical Terms and Symbols

Name Answer Key Score _____

Date _____ Class/Period/Instructor _____

In this exercise, you will become familiar with the common terms and symbols associated with basic electrical theory. This exercise also provides you with more practice using Ohm's law. The following electrical terms and symbols are used to describe electrical circuit action.

Voltage	*E*, V, volts, electrical pressure, electromotive force (emf), potential
Current	*I*, A, amperes, amps, electron flow
Resistance	*R*, Ω, ohms

Relate the terms and symbols to Ohm's law, and solve for the unknown values. Formulas for Ohm's law can be found on the previous Student Activity Sheet or in the textbook.

1. 15 volts	3 Ω	5 A
2. 2 Ω	12 *E*	6 A
3. .25 A	6 emf	24 Ω
4. 40 potential	20 *R*	2 A
5. 48 resistance	0.25 A	12 V
6. .24 amperes	100 Ω	24 *E*
7. 10 *E*	1000 Ω	0.01 A
8. 720 ohms	18 V	0.025 amperes
9. 110 V	2200 Ω	0.05 *I*
10. .06 *I*	6 volts	100 ohms