

Series Circuit Worksheet #3

Meets ASE Task: (A6-A-2) Diagnose Electrical/Electronic Integrity for Series, Parallel, and Series-Parallel Circuits Using Principles of Electricity (Ohm's Law). (P-1)

Name _____ Date _____ Time on Task _____

Make/Model/Year _____ VIN _____ Evaluation: 4 3 2 1

1.

$E = \underline{\hspace{2cm}}$ $R2 = 1 \text{ ohm}$
 $I_T = 6 \text{ amperes}$ $R3 = 1 \text{ ohm}$
 $R1 = 1 \text{ ohm}$ $R4 = 1 \text{ ohm}$

2.

$E = \underline{\hspace{2cm}}$ $R2 = 1 \text{ ohm}$
 $I_T = 3 \text{ amperes}$ $R3 = 0.5 \text{ ohms}$
 $R1 = 0.5 \text{ ohms}$ $R4 = 1 \text{ ohm}$

3.

$E = 4 \text{ volts}$
 $I_T = \underline{\hspace{2cm}}$
 $R_T = 3 \text{ ohms}$

4.

$E = 12 \text{ volts}$ $R2 = \underline{\hspace{2cm}}$ $R5 = 1 \text{ ohm}$
 $I_T = 1 \text{ amperes}$ $R3 = 4 \text{ ohms}$
 $R1 = 2 \text{ ohm}$ $R4 = 3 \text{ ohms}$

5.

$E = 24 \text{ volts}$ $R2 = 0.5 \text{ ohms}$ $R5 = 0.25 \text{ ohms}$
 $I_T = 12 \text{ amperes}$ $R3 = \underline{\hspace{2cm}}$
 $R1 = 0.5 \text{ ohms}$ $R4 = 0.5 \text{ ohms}$

6.

$E = 24 \text{ volts}$ $R2 = 1 \text{ ohm}$ $R5 = 2 \text{ ohms}$
 $I_T = 3 \text{ amperes}$ $R3 = 2 \text{ ohms}$
 $R1 = 2 \text{ ohms}$ $R4 = \underline{\hspace{2cm}}$