

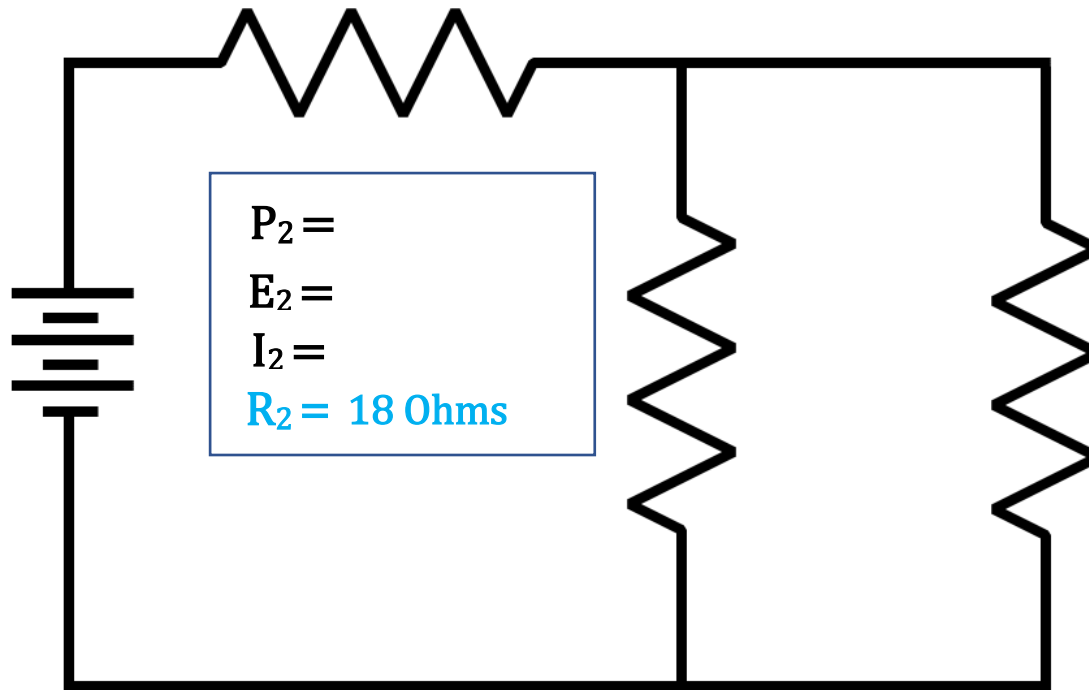
Series Parallel Math Example 2

Math

Rule

$P_1 =$
 $E_1 =$
 $I_1 = 3.5 \text{ Amps}$
 $R_1 =$

$P_T =$
 $E_T = 28 \text{ Volts}$
 $I_T =$
 $R_T =$



$P_2 =$
 $E_2 =$
 $I_2 =$
 $R_2 = 18 \text{ Ohms}$

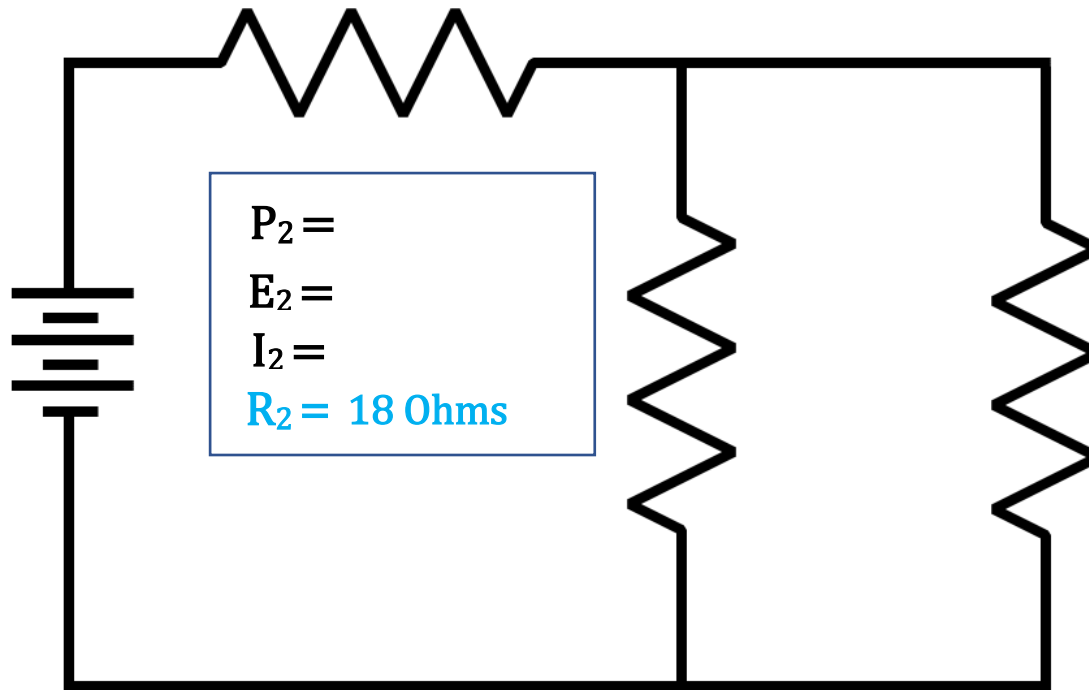
$P_3 =$
 $E_3 =$
 $I_3 =$
 $R_3 = 6.6 \text{ Ohms}$

Math

Rule

$P_1 =$
 $E_1 =$
 $I_1 = 3.5 \text{ Amps}$
 $R_1 =$

$P_T =$
 $E_T = 28 \text{ Volts}$
 $I_T = 3.5 \text{ Amps}$
 $R_T =$



$P_2 =$
 $E_2 =$
 $I_2 =$
 $R_2 = 18 \text{ Ohms}$

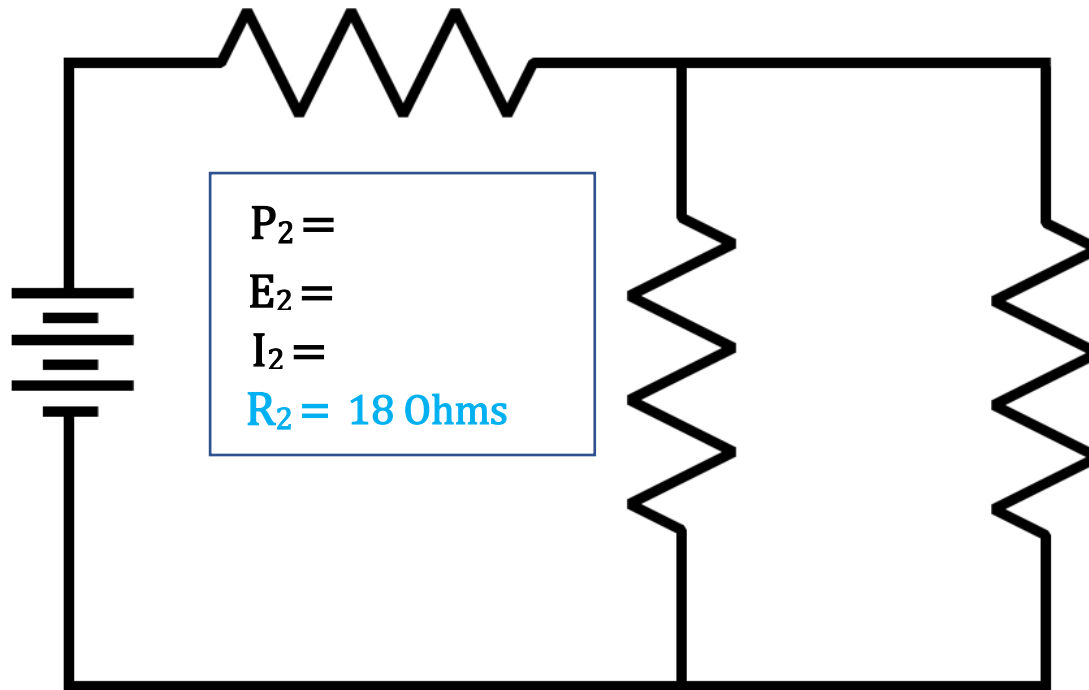
$P_3 =$
 $E_3 =$
 $I_3 =$
 $R_3 = 6.6 \text{ Ohms}$

Math

Rule

$P_1 =$
 $E_1 =$
 $I_1 = 3.5 \text{ Amps}$
 $R_1 =$

$P_T = 98 \text{ Watts}$
 $E_T = 28 \text{ Volts}$
 $I_T = 3.5 \text{ Amps}$
 $R_T = 8 \text{ Ohms}$



$P_2 =$
 $E_2 =$
 $I_2 =$
 $R_2 = 18 \text{ Ohms}$

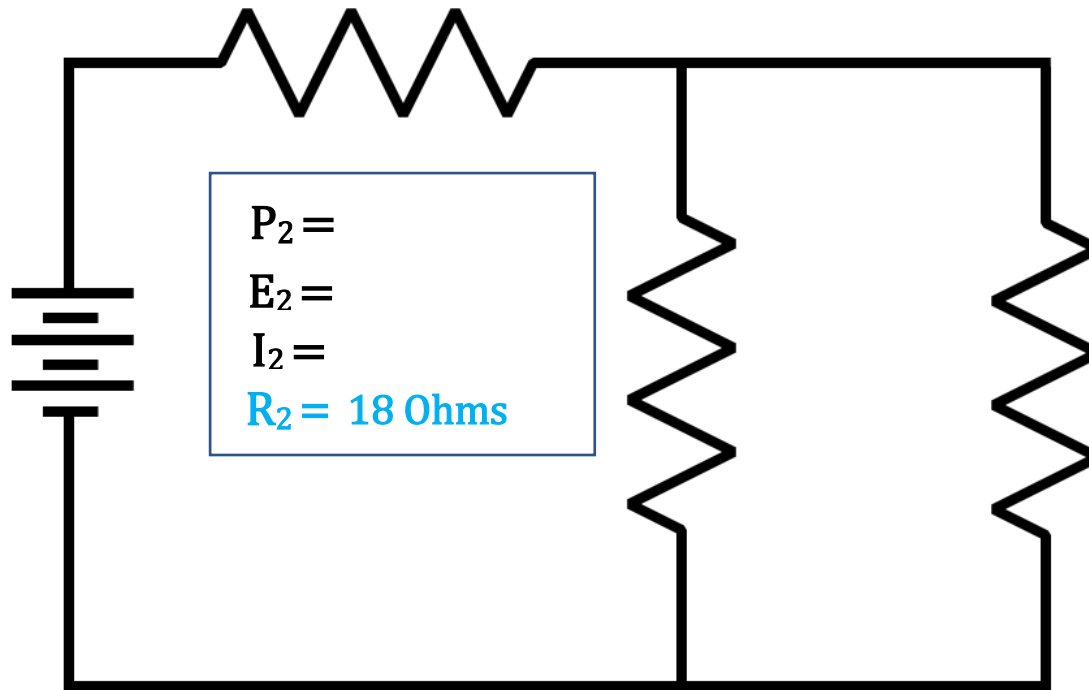
$P_3 =$
 $E_3 =$
 $I_3 =$
 $R_3 = 6.6 \text{ Ohms}$

Math

Rule

$P_1 =$
 $E_1 =$
 $I_1 = 3.5 \text{ Amps}$
 $R_1 =$

$P_T = 98 \text{ Watts}$
 $E_T = 28 \text{ Volts}$
 $I_T = 3.5 \text{ Amps}$
 $R_T = 8 \text{ Ohms}$



$P_2 =$
 $E_2 =$
 $I_2 =$
 $R_2 = 18 \text{ Ohms}$

$P_3 =$
 $E_3 =$
 $I_3 =$
 $R_3 = 6.6 \text{ Ohms}$

$$R_{2,3} = \frac{R_2 \times R_3}{R_2 + R_3}$$

$$R_{2,3} = \frac{18 \times 6.6}{18 + 6.6}$$

$$R_{2,3} = \frac{118.8}{24.6}$$

$$R_{2,3} = 4.83 \text{ Ohms}$$

Math

Rule

$P_1 =$
 $E_1 =$
 $I_1 = 3.5 \text{ Amps}$
 $R_1 =$

$P_T = 98 \text{ Watts}$
 $E_T = 28 \text{ Volts}$
 $I_T = 3.5 \text{ Amps}$
 $R_T = 8 \text{ Ohms}$



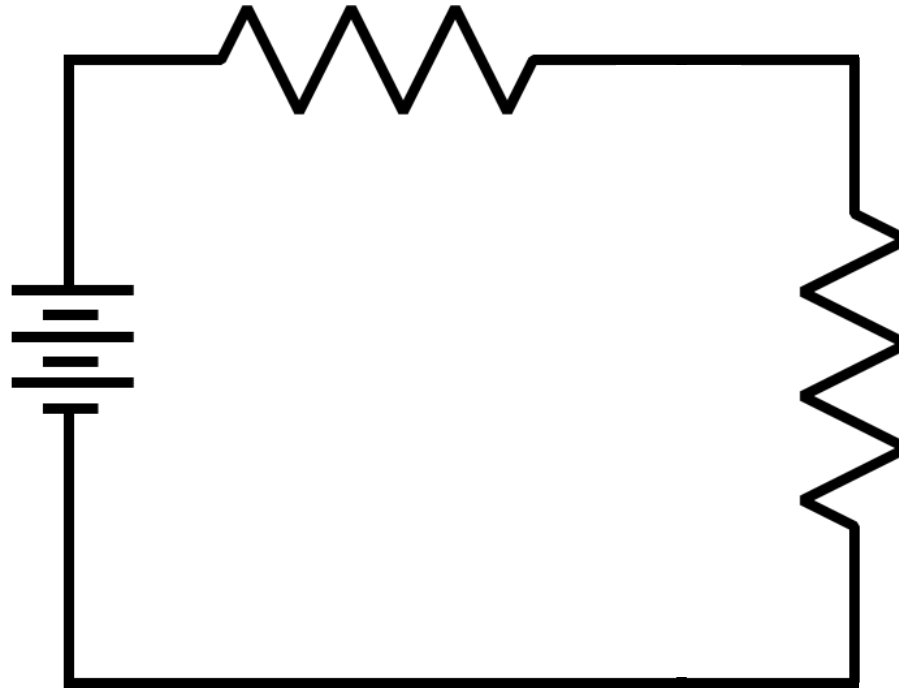
$P_{2,3} =$
 $E_{2,3} =$
 $I_{2,3} =$
 $R_{2,3} = 4.83 \text{ Ohms}$

$$R_{2,3} = \frac{R_2 \times R_3}{R_2 + R_3} \quad R_{2,3} = \frac{18 \times 6.6}{18 + 6.6} \quad R_{2,3} = \frac{118.8}{24.6} \quad R_{2,3} = 4.83 \text{ Ohms}$$

Math

Rule

$P_1 =$
 $E_1 =$
 $I_1 = 3.5 \text{ Amps}$
 $R_1 =$



$P_T = 98 \text{ Watts}$
 $E_T = 28 \text{ Volts}$
 $I_T = 3.5 \text{ Amps}$
 $R_T = 8 \text{ Ohms}$

$P_{2,3} =$
 $E_{2,3} =$
 $I_{2,3} =$
 $R_{2,3} = 4.83 \text{ Ohms}$

$$R_{2,3} = \frac{R_2 \times R_3}{R_2 + R_3} \quad R_{2,3} = \frac{18 \times 6.6}{18 + 6.6} \quad R_{2,3} = \frac{118.8}{24.6} \quad R_{2,3} = 4.83 \text{ Ohms}$$

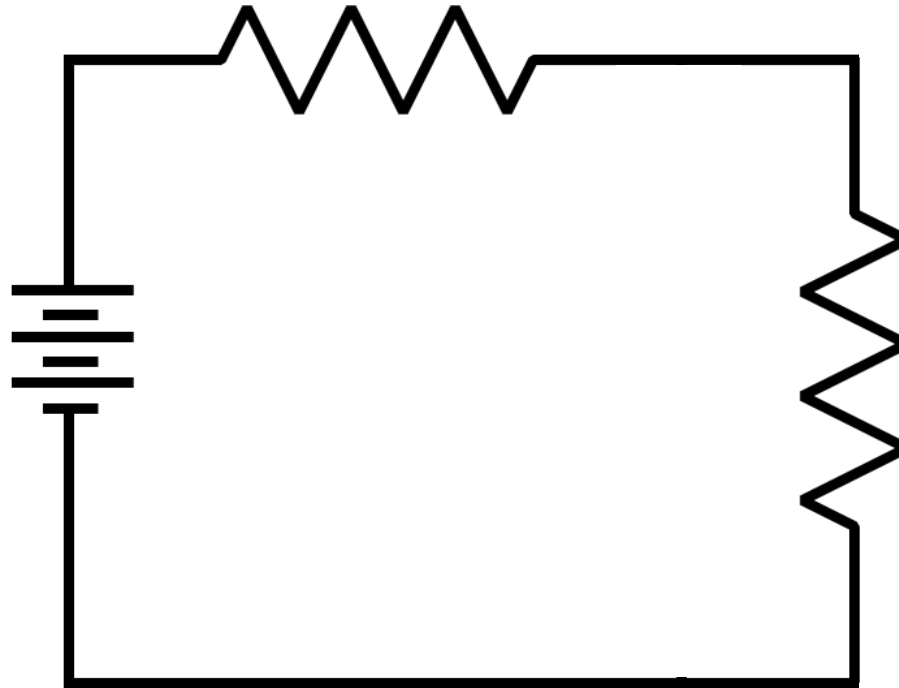
$$R_1 = R_T - R_{2,3} = 8 - 4.83 = 3.17 \text{ Ohms}$$

Math

Rule

$$P_1 =$$
$$E_1 =$$
$$I_1 = 3.5 \text{ Amps}$$
$$R_1 = 3.17 \text{ Ohms}$$

$$P_T = 98 \text{ Watts}$$
$$E_T = 28 \text{ Volts}$$
$$I_T = 3.5 \text{ Amps}$$
$$R_T = 8 \text{ Ohms}$$



$$P_{2,3} =$$
$$E_{2,3} =$$
$$I_{2,3} =$$
$$R_{2,3} = 4.83 \text{ Ohms}$$

$$R_{2,3} = \frac{R_2 \times R_3}{R_2 + R_3}$$
$$R_{2,3} = \frac{18 \times 6.6}{18 + 6.6}$$
$$R_{2,3} = \frac{118.8}{24.6}$$
$$R_{2,3} = 4.83 \text{ Ohms}$$

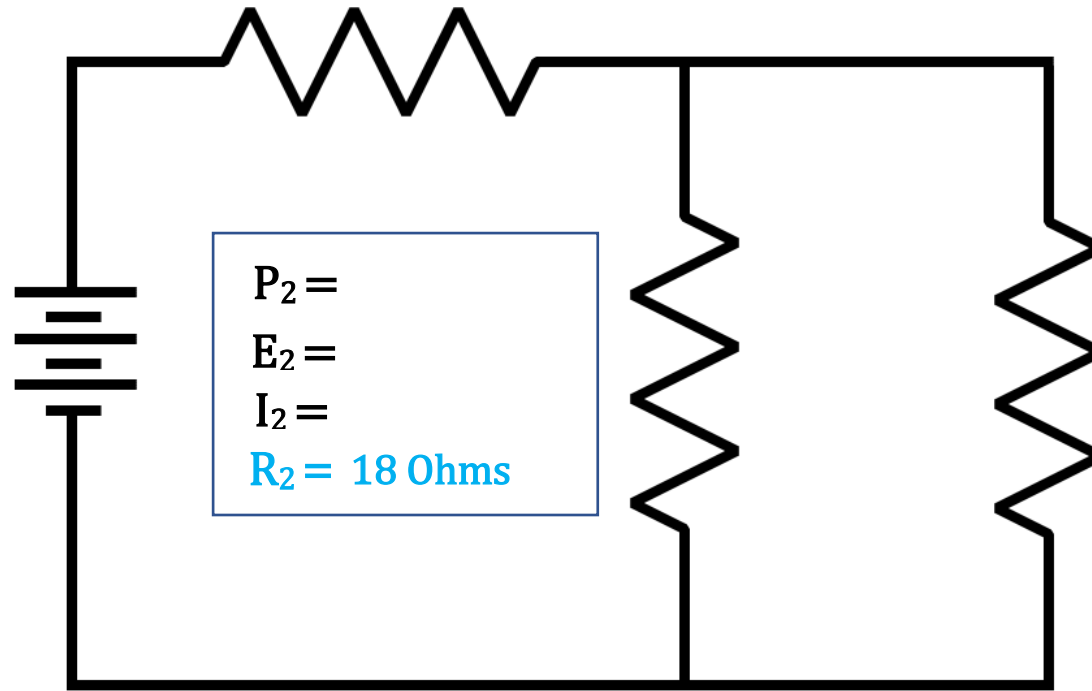
$$R_1 = R_T - R_{2,3} = 8 - 4.83 = 3.17 \text{ Ohms}$$

Math

Rule

$P_1 =$
 $E_1 =$
 $I_1 = 3.5 \text{ Amps}$
 $R_1 = 3.17 \text{ Ohms}$

$P_T = 98 \text{ Watts}$
 $E_T = 28 \text{ Volts}$
 $I_T = 3.5 \text{ Amps}$
 $R_T = 8 \text{ Ohms}$



$P_2 =$
 $E_2 =$
 $I_2 =$
 $R_2 = 18 \text{ Ohms}$

$P_3 =$
 $E_3 =$
 $I_3 =$
 $R_3 = 6.6 \text{ Ohms}$

$$R_{2,3} = \frac{R_2 \times R_3}{R_2 + R_3} \quad R_{2,3} = \frac{18 \times 6.6}{18 + 6.6} \quad R_{2,3} = \frac{118.8}{24.6} \quad R_{2,3} = 4.83 \text{ Ohms}$$

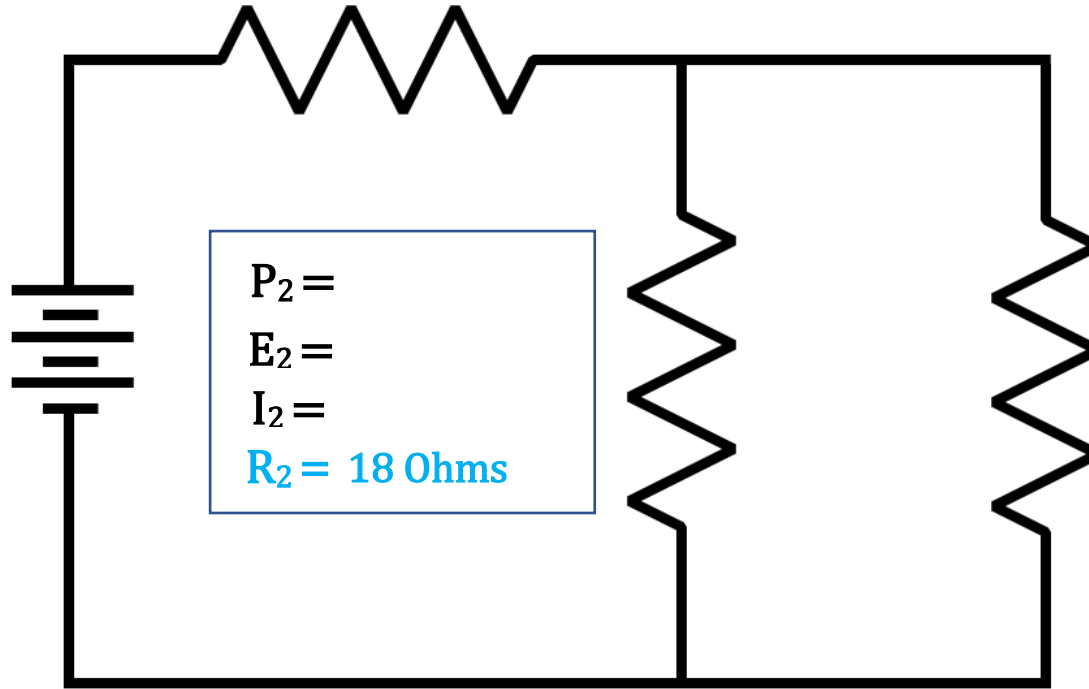
$$R_1 = R_T - R_{2,3} = 8 - 4.83 = 3.17 \text{ Ohms}$$

Math

Rule

$P_1 = 38.85$ Watts
 $E_1 = 11.10$ Volts
 $I_1 = 3.5$ Amps
 $R_1 = 3.17$ Ohms

$P_T = 98$ Watts
 $E_T = 28$ Volts
 $I_T = 3.5$ Amps
 $R_T = 8$ Ohms



$P_2 =$
 $E_2 =$
 $I_2 =$
 $R_2 = 18$ Ohms

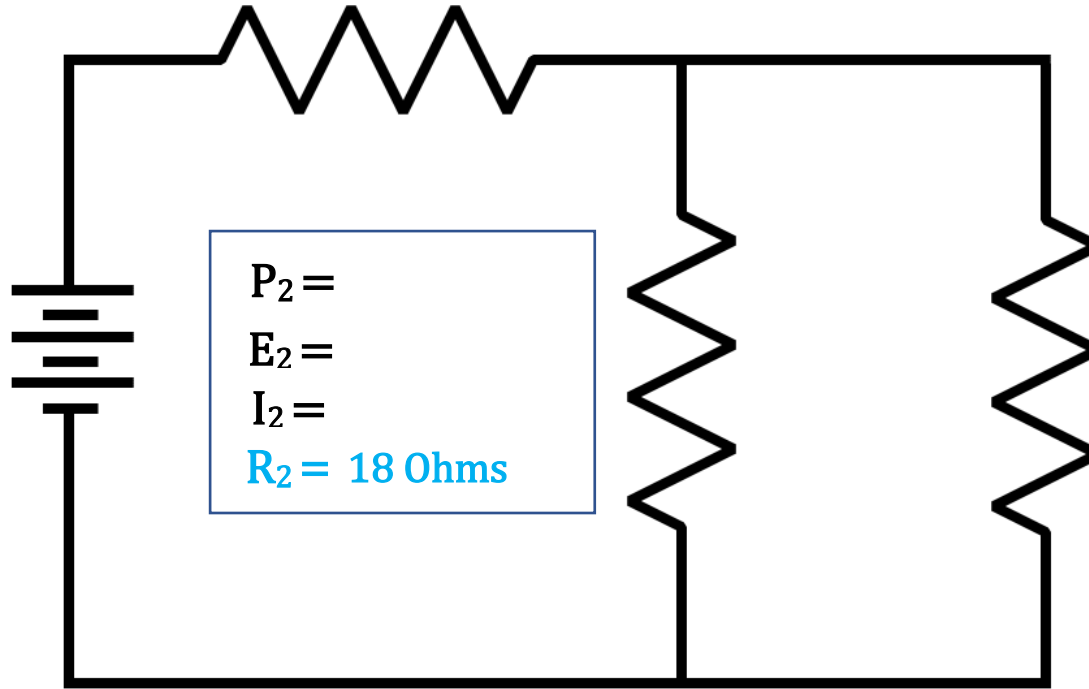
$P_3 =$
 $E_3 =$
 $I_3 =$
 $R_3 = 6.6$ Ohms

Math

Rule

$$\begin{aligned}P_1 &= 38.85 \text{ Watts} \\E_1 &= 11.10 \text{ Volts} \\I_1 &= 3.5 \text{ Amps} \\R_1 &= 3.17 \text{ Ohms}\end{aligned}$$

$$\begin{aligned}P_T &= 98 \text{ Watts} \\E_T &= 28 \text{ Volts} \\I_T &= 3.5 \text{ Amps} \\R_T &= 8 \text{ Ohms}\end{aligned}$$



$$\begin{aligned}P_2 &= \\E_2 &= \\I_2 &= \\R_2 &= 18 \text{ Ohms}\end{aligned}$$

$$\begin{aligned}P_3 &= \\E_3 &= \\I_3 &= \\R_3 &= 6.6 \text{ Ohms}\end{aligned}$$

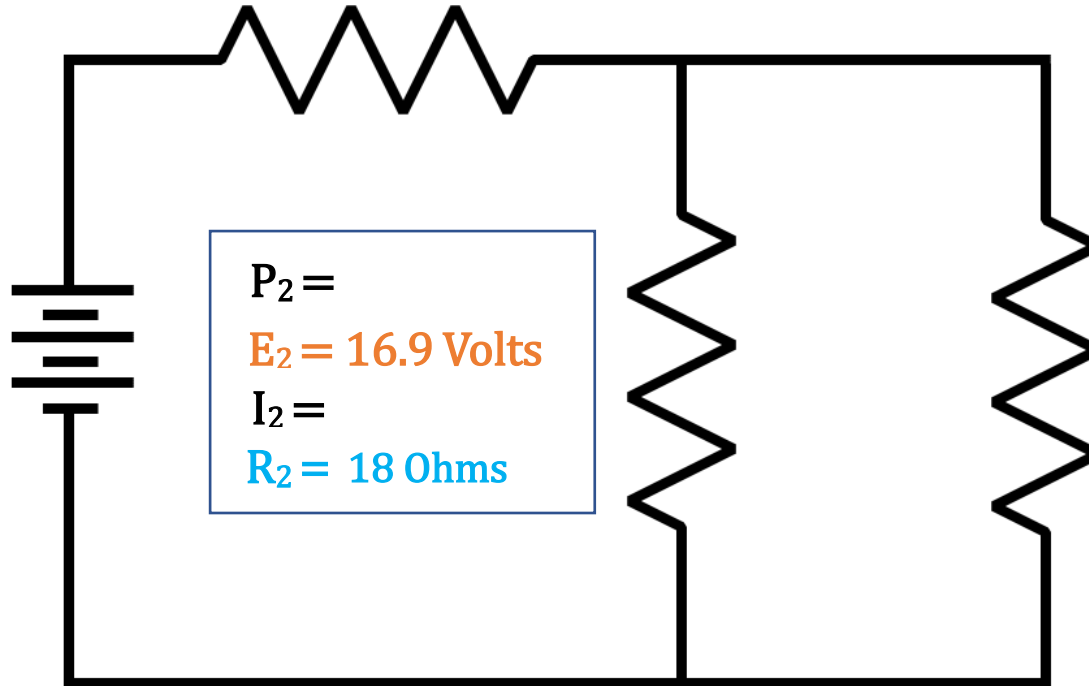
$$E_{2,3} = E_T - E_1 = 28 - 11.10 = 16.9 \text{ Volts}$$

Math

Rule

$P_1 = 38.85$ Watts
 $E_1 = 11.10$ Volts
 $I_1 = 3.5$ Amps
 $R_1 = 3.17$ Ohms

$P_T = 98$ Watts
 $E_T = 28$ Volts
 $I_T = 3.5$ Amps
 $R_T = 8$ Ohms



$P_2 =$
 $E_2 = 16.9$ Volts
 $I_2 =$
 $R_2 = 18$ Ohms

$P_3 =$
 $E_3 = 16.9$ Volts
 $I_3 =$
 $R_3 = 6.6$ Ohms

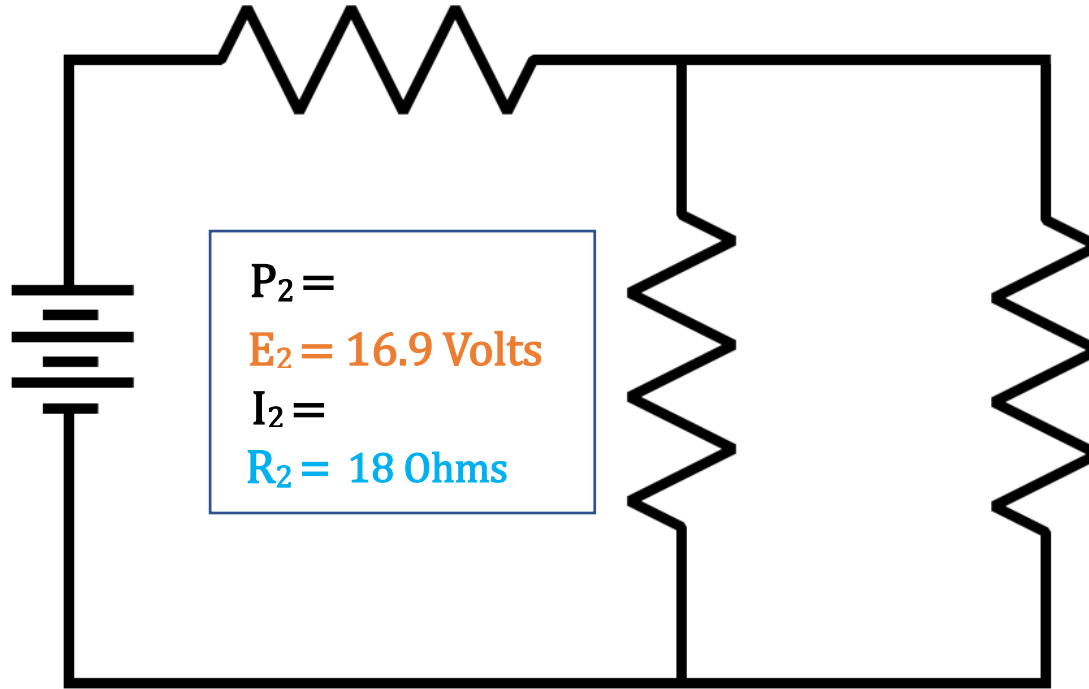
$$E_{2,3} = E_T - E_1 = 28 - 11.10 = 16.9 \text{ Volts}$$

Math

Rule

$P_1 = 38.85$ Watts
 $E_1 = 11.10$ Volts
 $I_1 = 3.5$ Amps
 $R_1 = 3.17$ Ohms

$P_T = 98$ Watts
 $E_T = 28$ Volts
 $I_T = 3.5$ Amps
 $R_T = 8$ Ohms



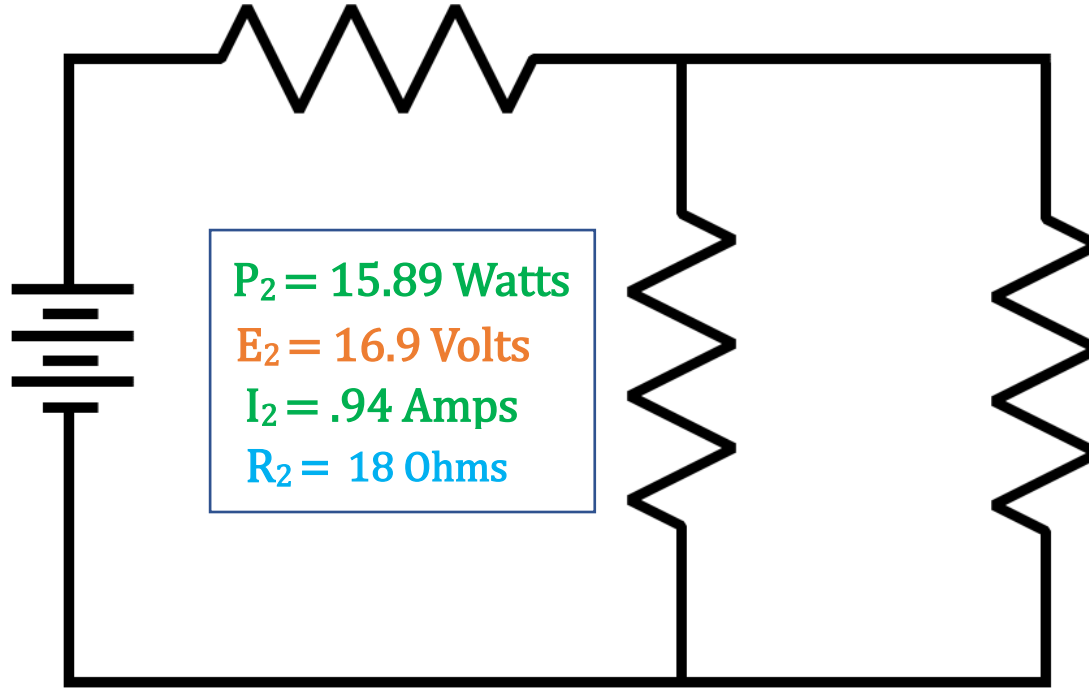
$P_2 =$
 $E_2 = 16.9$ Volts
 $I_2 =$
 $R_2 = 18$ Ohms

$P_3 =$
 $E_3 = 16.9$ Volts
 $I_3 =$
 $R_3 = 6.6$ Ohms

Math

Rule

$P_1 = 38.85$ Watts
 $E_1 = 11.10$ Volts
 $I_1 = 3.5$ Amps
 $R_1 = 3.17$ Ohms



$P_T = 98$ Watts
 $E_T = 28$ Volts
 $I_T = 3.5$ Amps
 $R_T = 8$ Ohms

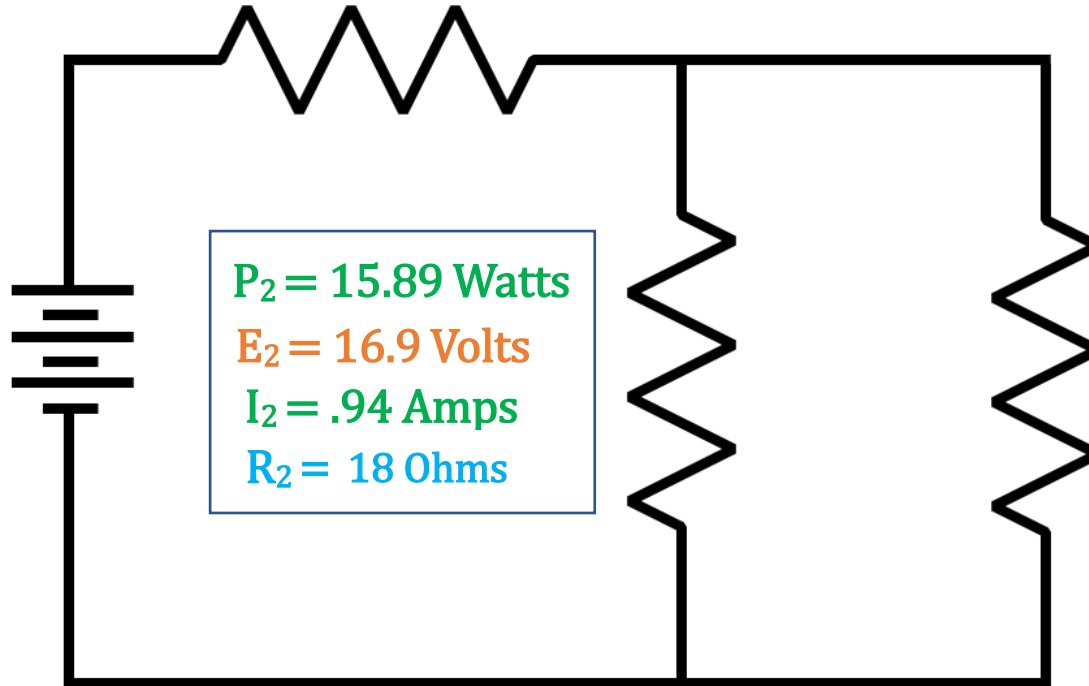
$P_2 = 15.89$ Watts
 $E_2 = 16.9$ Volts
 $I_2 = .94$ Amps
 $R_2 = 18$ Ohms

$P_3 =$
 $E_3 = 16.9$ Volts
 $I_3 =$
 $R_3 = 6.6$ Ohms

Math

Rule

$P_1 = 38.85$ Watts
 $E_1 = 11.10$ Volts
 $I_1 = 3.5$ Amps
 $R_1 = 3.17$ Ohms



$P_T = 98$ Watts
 $E_T = 28$ Volts
 $I_T = 3.5$ Amps
 $R_T = 8$ Ohms

$P_2 = 15.89$ Watts
 $E_2 = 16.9$ Volts
 $I_2 = .94$ Amps
 $R_2 = 18$ Ohms

$P_3 = 43.26$ Watts
 $E_3 = 16.9$ Volts
 $I_3 = 2.56$ Amps
 $R_3 = 6.6$ Ohms