Series Parallel Math Example 2

Math

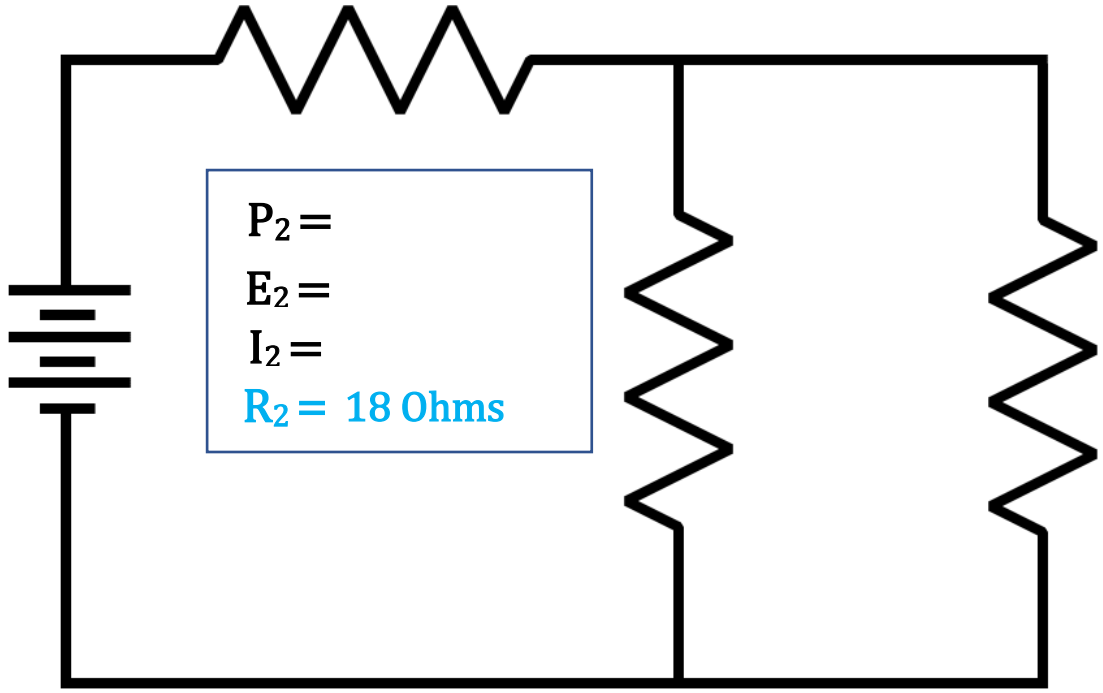
Rule

$P_1 =$

$E_1 =$

$I_1 = 3.5$ Amps

$R_1 =$



$P_T =$

$E_T = 28$ Volts

$I_T =$

$R_T =$

$P_2 =$

$E_2 =$

$I_2 =$

$R_2 = 18$ Ohms

$P_3 =$

$E_3 =$

$I_3 =$

$R_3 = 6.6$ Ohms

Math

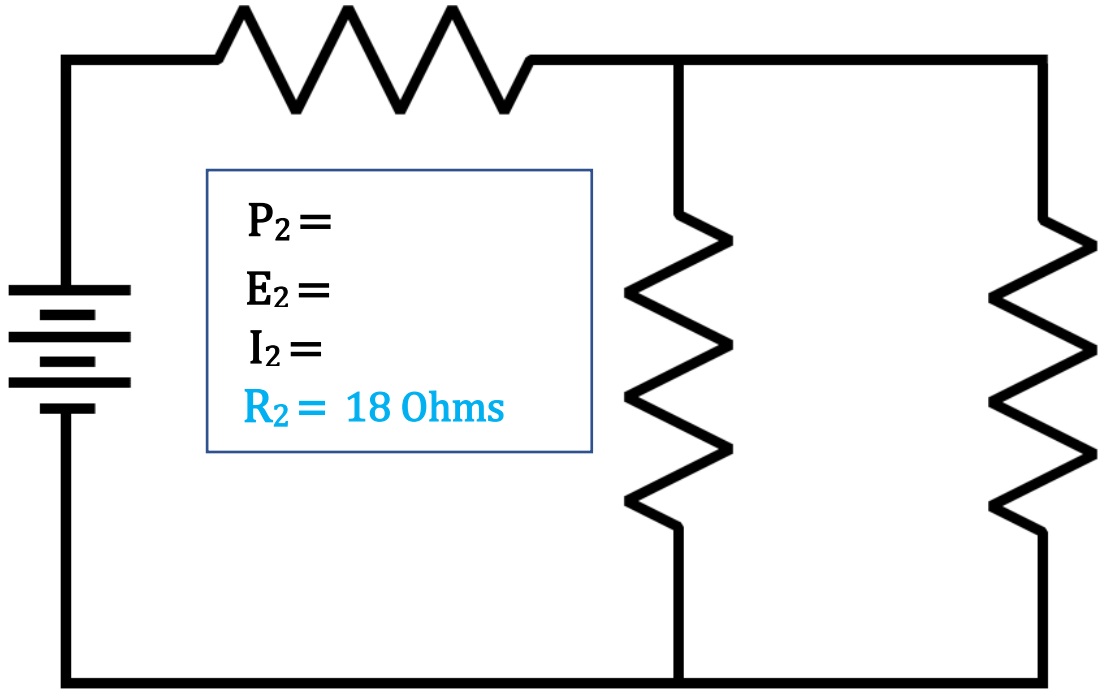
Rule

$P_1 =$

$E_1 =$

$I_1 = 3.5$ Amps

$R_1 =$



$P_T =$

$E_T = 28$ Volts

$I_T = 3.5$ Amps

$R_T =$

$P_2 =$

$E_2 =$

$I_2 =$

$R_2 = 18$ Ohms

$P_3 =$

$E_3 =$

$I_3 =$

$R_3 = 6.6$ Ohms

Math

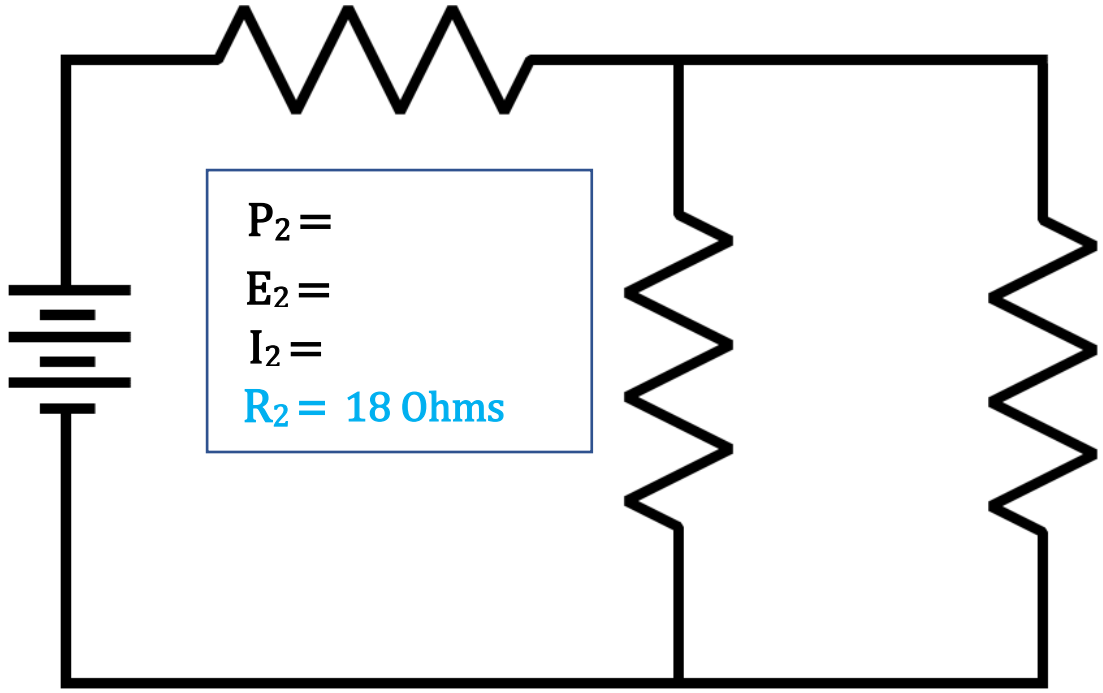
Rule

$P_1 =$

$E_1 =$

$I_1 = 3.5$ Amps

$R_1 =$



$P_T = 98$ 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

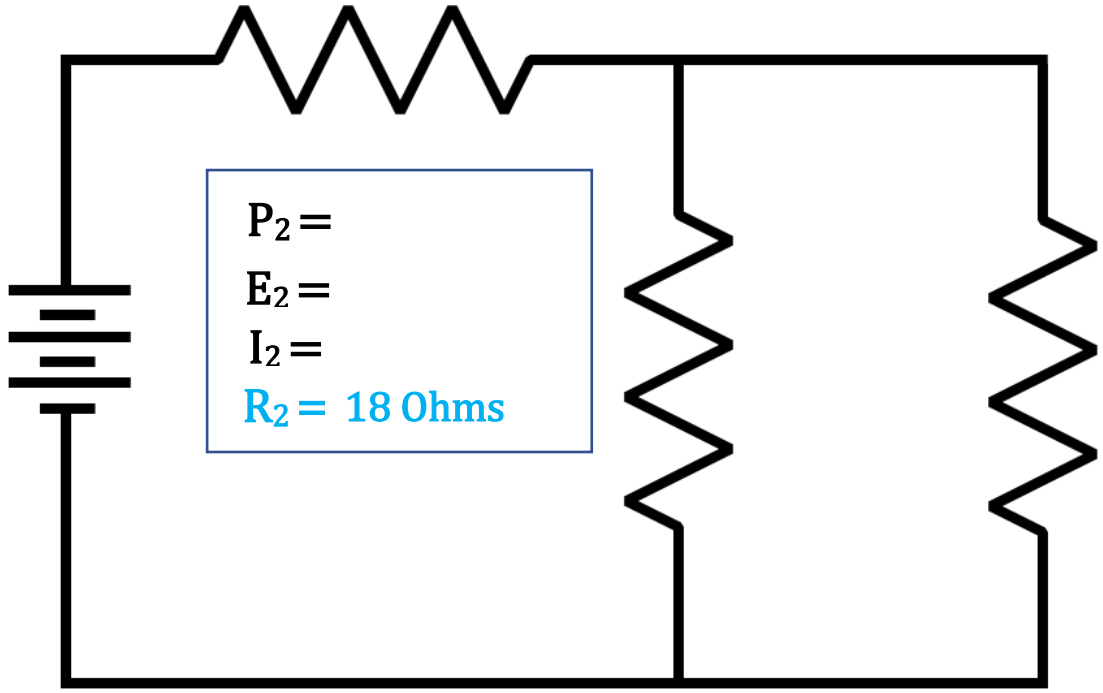
Rule

$P_1 =$

$E_1 =$

$I_1 = 3.5$ Amps

$R_1 =$



$P_T = 98$ 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

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

Math

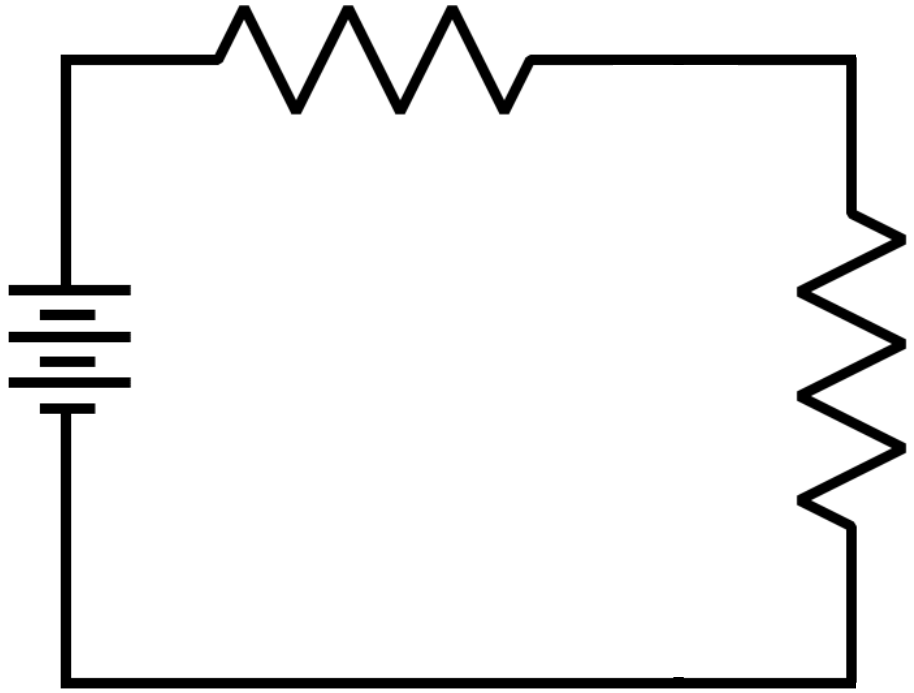
Rule

$P_1 =$

$E_1 =$

$I_1 = 3.5$ Amps

$R_1 =$



$P_T = 98$ Watts

$E_T = 28$ Volts

$I_T = 3.5$ Amps

$R_T = 8$ Ohms

$P_{2,3} =$

$E_{2.3} =$

$I_{2.3} =$

$R_{2,3} = 4.83$ Ohms

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

Math

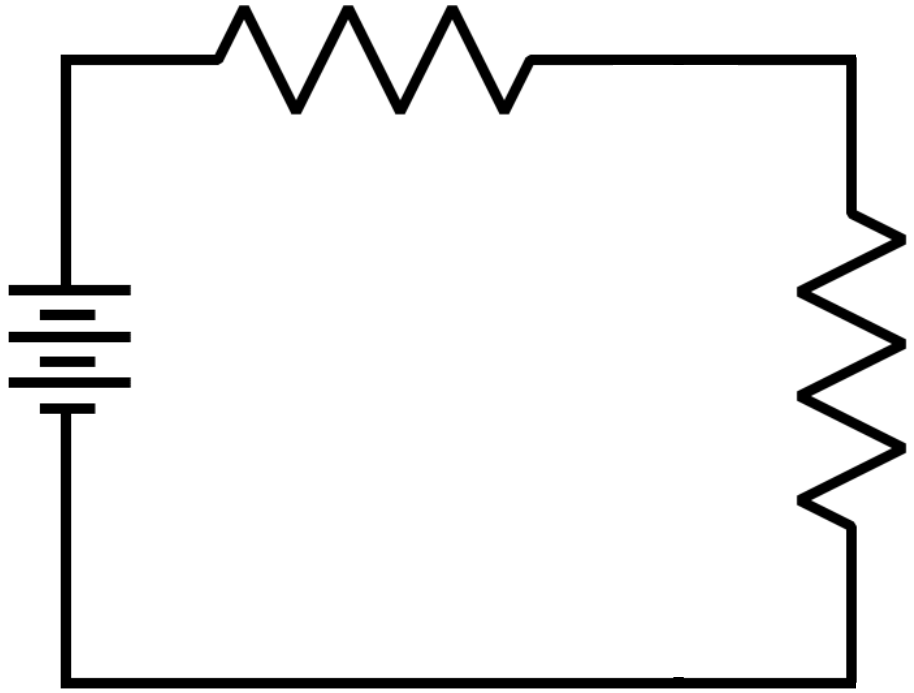
Rule

$P_1 =$

$E_1 =$

$I_1 = 3.5$ Amps

$R_1 =$



$P_T = 98$ Watts

$E_T = 28$ Volts

$I_T = 3.5$ Amps

$R_T = 8$ Ohms

$P_{2,3} =$

$E_{2.3} =$

$I_{2.3} =$

$R_{2,3} = 4.83$ Ohms

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

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

Math

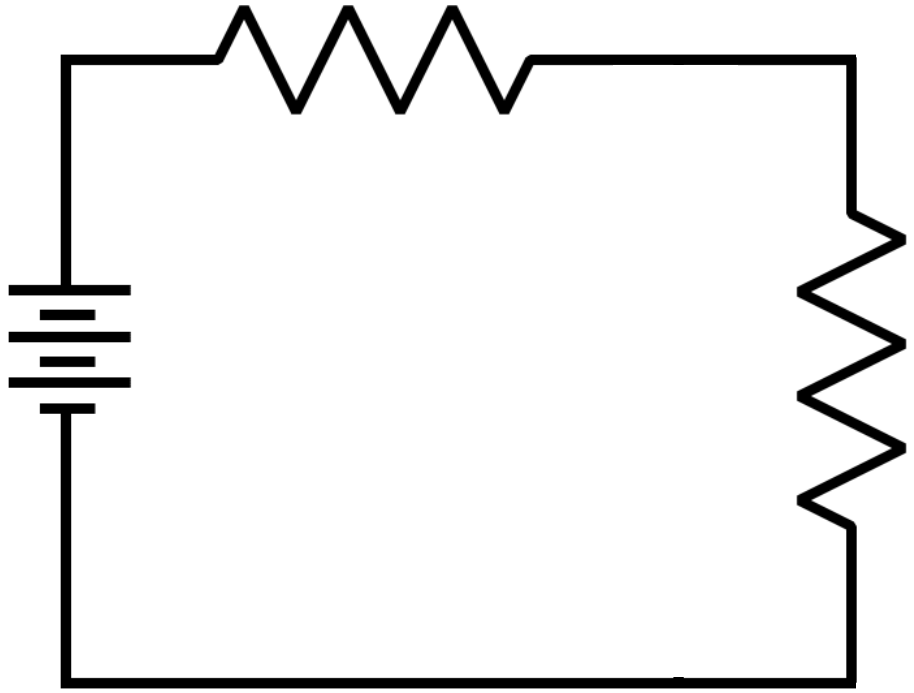
Rule

$P_1 =$

$E_1 =$

$I_1 = 3.5$ Amps

$R_1 = 3.17$ Ohms



$P_T = 98$ Watts

$E_T = 28$ Volts

$I_T = 3.5$ Amps

$R_T = 8$ Ohms

$P_{2,3} =$

$E_{2.3} =$

$I_{2.3} =$

$R_{2,3} = 4.83$ Ohms

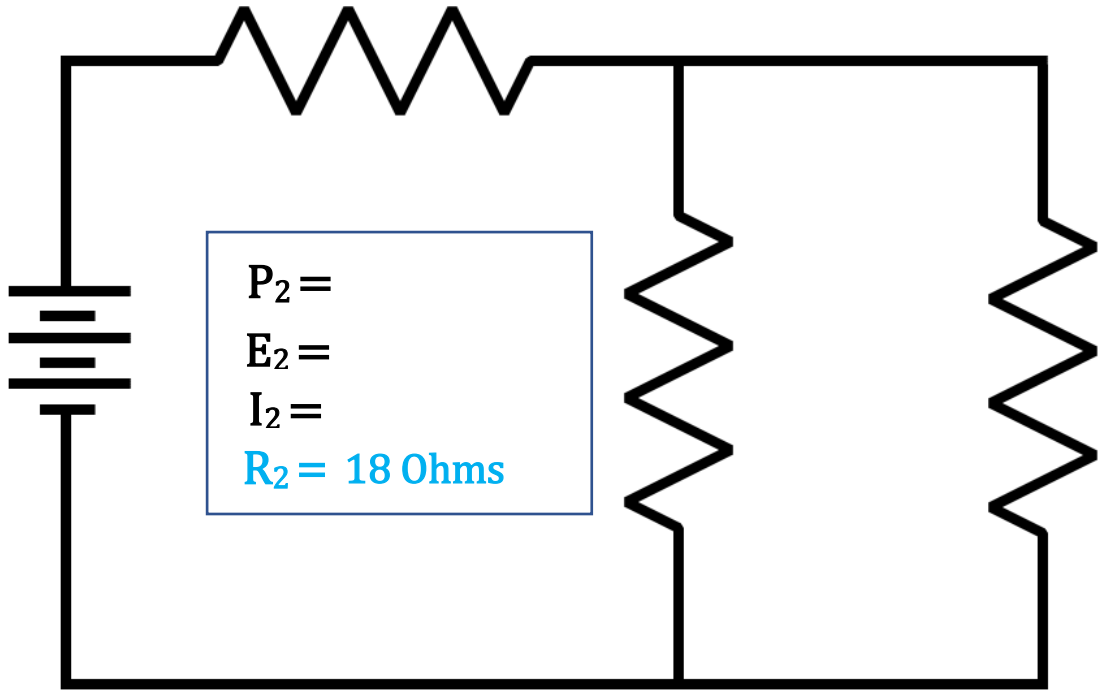
$$R_{2,3} = \frac{R_2 \times R_3}{R_2 + R_3} \qquad R_{2,3} = \frac{18 \times 6.6}{18 + 6.6} \qquad R_{2,3} = \frac{118.8}{24.6} \qquad R_{2,3} = 4.83 \text{ Ohms}$$

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

Math

Rule

$P_1 =$
$E_1 =$
$I_1 = 3.5$ 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

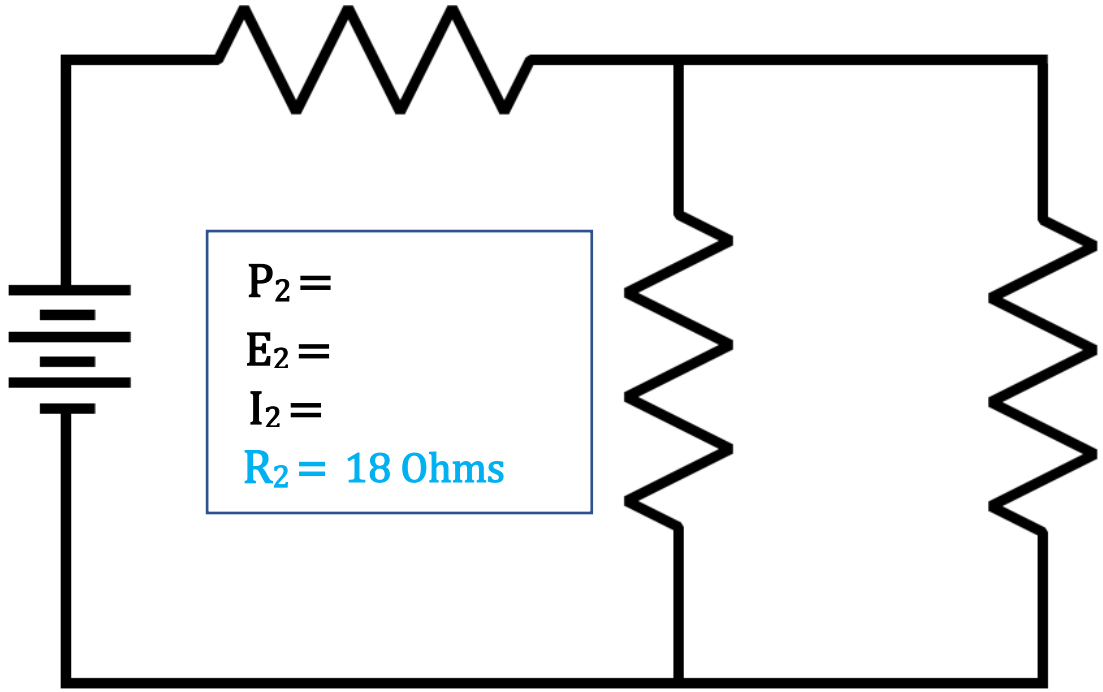
$$R_{2,3} = \frac{R_2 \times R_3}{R_2 + R_3} \qquad R_{2,3} = \frac{18 \times 6.6}{18 + 6.6} \qquad R_{2,3} = \frac{118.8}{24.6} \qquad R_{2,3} = 4.83 \text{ Ohms}$$

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

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

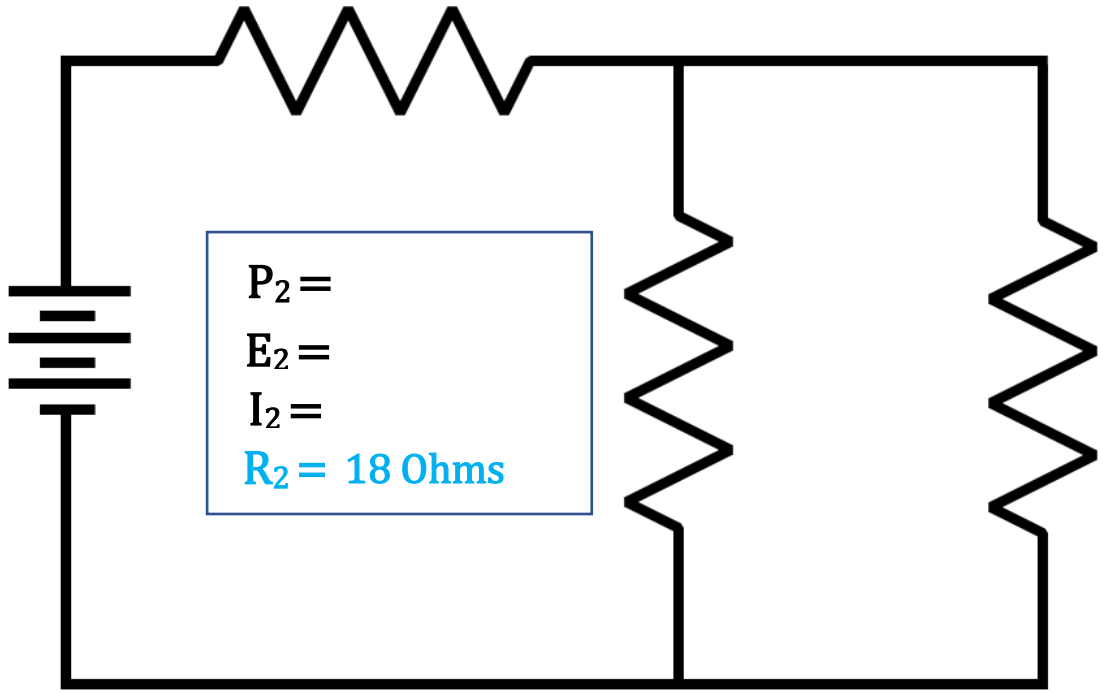
$P_2 =$
$E_2 =$
$I_2 =$
$R_2 = 18$ Ohms

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

Math

Rule

$P_1 = 38.85$ 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

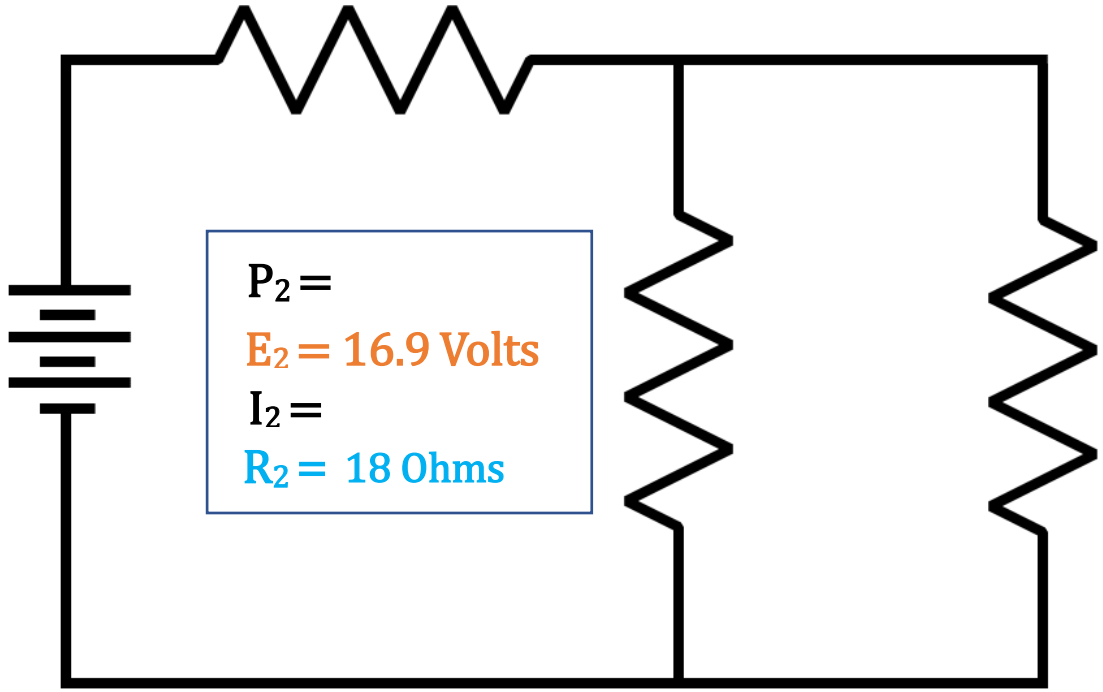
$P_3 =$
$E_3 =$
$I_3 =$
$R_3 = 6.6$ Ohms

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

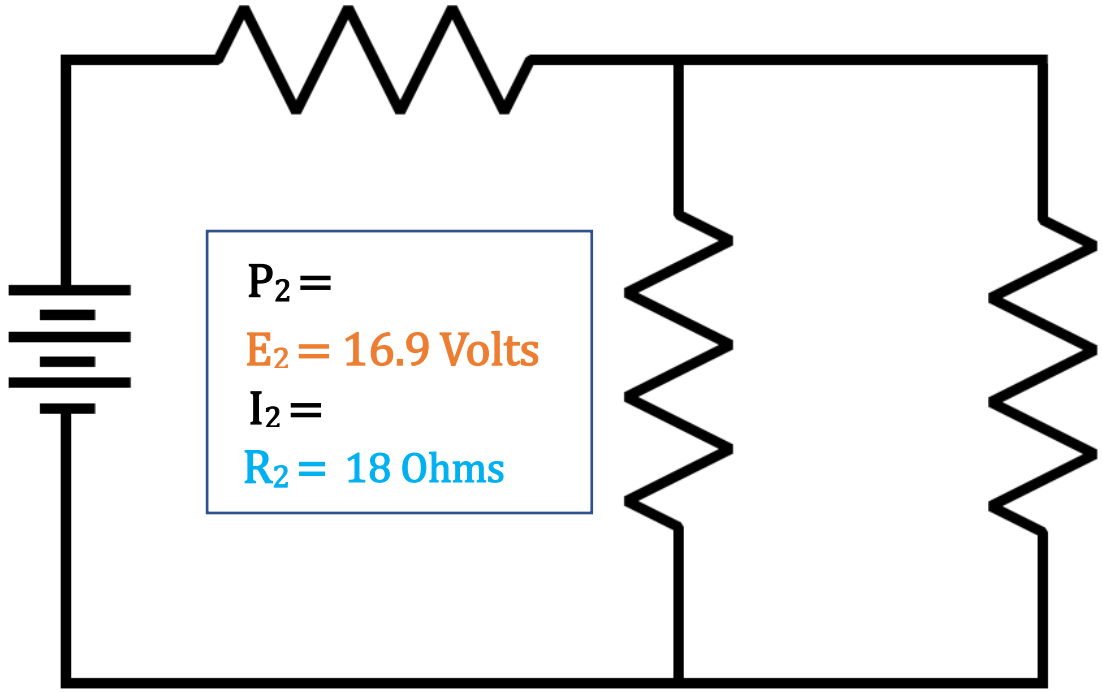
$P_3 =$
$E_3 = 16.9$ Volts
$I_3 =$
$R_3 = 6.6$ Ohms

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

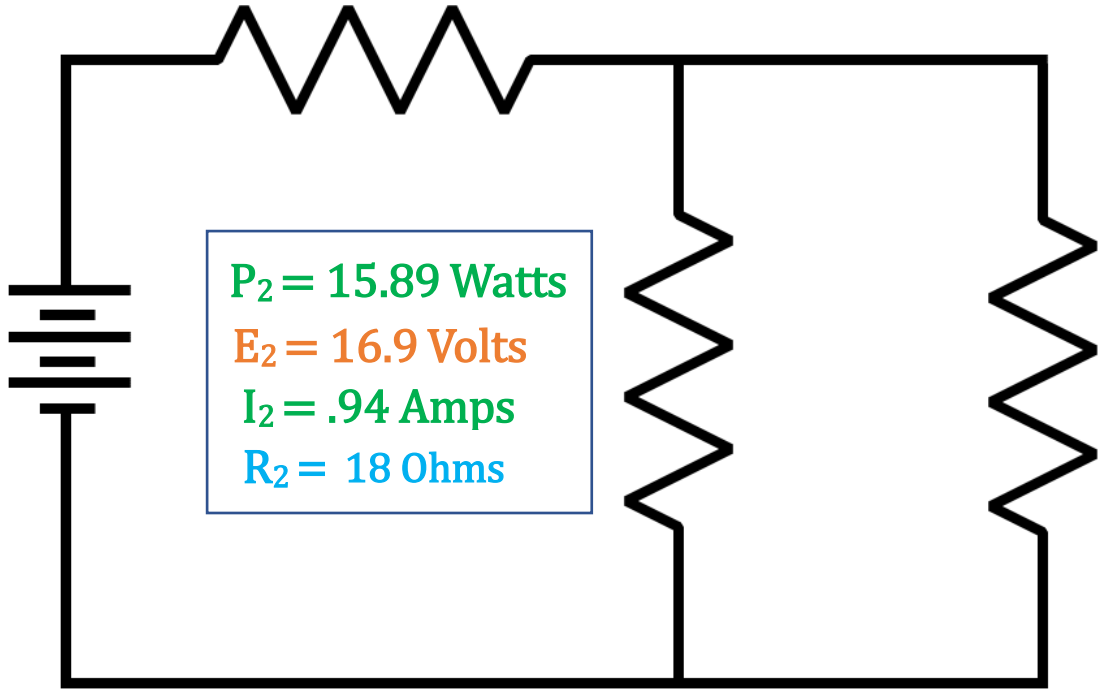
$P_2 =$
$E_2 = 16.9$ Volts
$I_2 =$
$R_2 = 18$ Ohms

$P_3 =$
$E_3 = 16.9$ 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

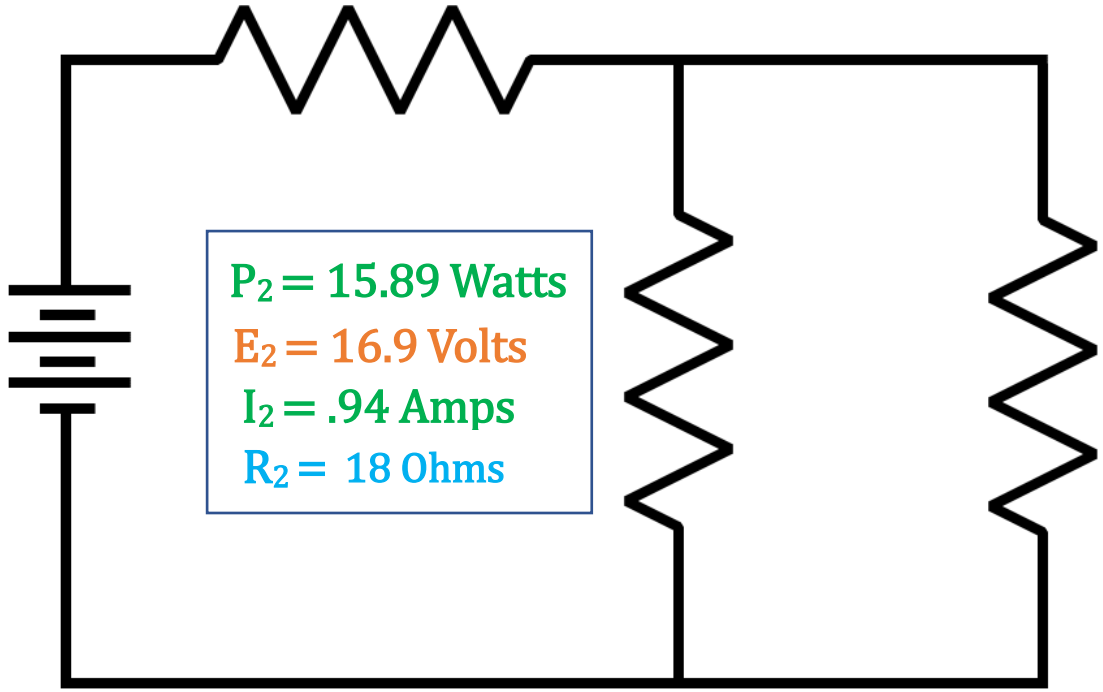
$P_2 = 15.89$ Watts
$E_2 = 16.9$ Volts
$I_2 = .94$ Amps
$R_2 = 18$ Ohms

$P_3 =$
$E_3 = 16.9$ 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