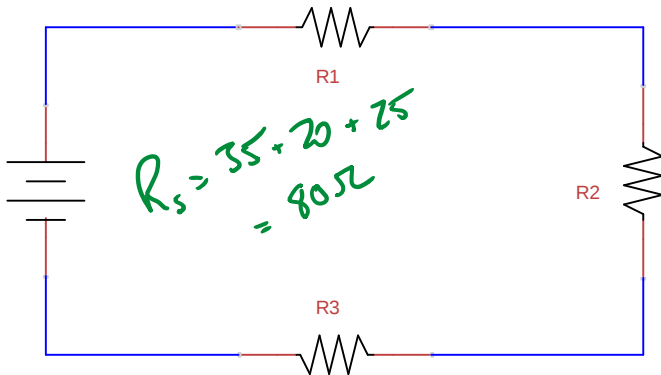


Name _____ Date _____
Teacher _____ Period _____

Equivalent Resistance Practice

Parallel: $\frac{1}{R_{eq}} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \dots$

Series: $R_{eq} = R_1 + R_2 + R_3 + \dots$



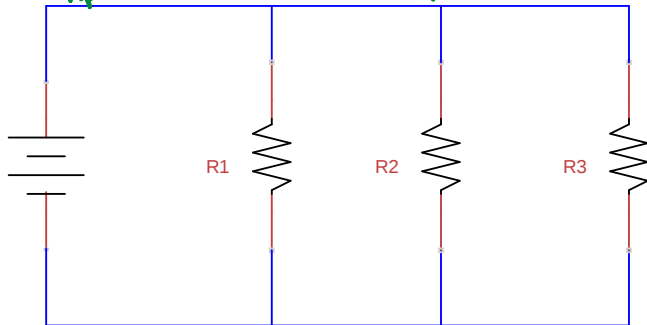
$R_1 = 35 \, \Omega$

$R_2 = 20 \, \Omega$

$R_3 = 25 \, \Omega$

$V_{Total} \, (V)$	$I_{Total} \, (A)$	$R_{Total} \, (\Omega)$
120.0	1.5 A	80 Ω

$\frac{1}{R_p} = \frac{1}{50} + \frac{1}{25} + \frac{1}{50} \Rightarrow \frac{1}{R_p} = .08 \quad R_p = \frac{1}{.08} = 12.5$

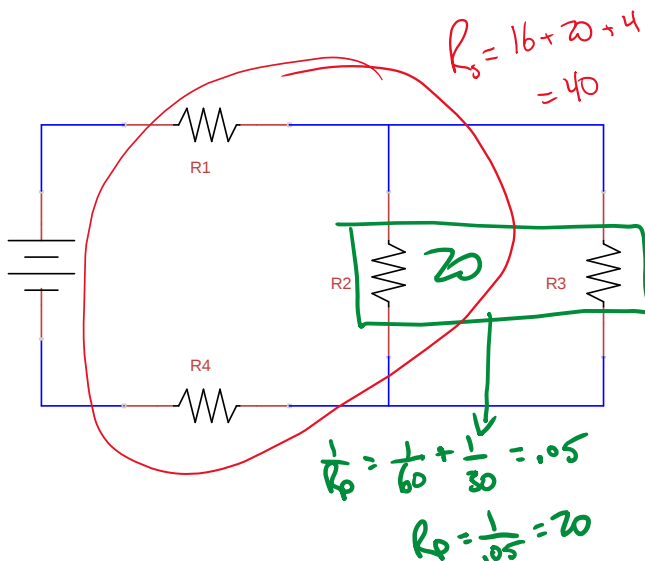


$R_1 = 50 \, \Omega$

$R_2 = 25 \, \Omega$

$R_3 = 50 \, \Omega$

$V_{Total} \, (V)$	$I_{Total} \, (A)$	$R_{Total} \, (\Omega)$
75.0	6 A	12.5 Ω



$R_1 = 16 \, \Omega$

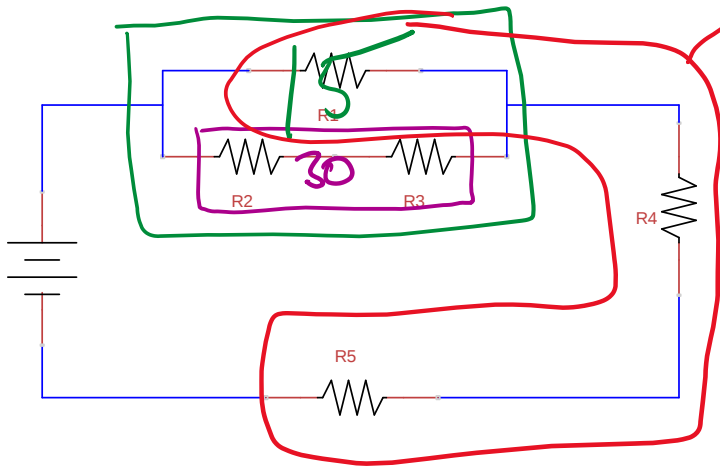
$R_2 = 60 \, \Omega$

$R_3 = 30 \, \Omega$

$R_4 = 4 \, \Omega$

$V_{Total} \, (V)$	$I_{Total} \, (A)$	$R_{Total} \, (\Omega)$
80.0	2 A	40 Ω

$$\frac{1}{R_p} = \frac{1}{30} + \frac{1}{30} = .06 \quad R_p = \frac{1}{.06} = 15$$



$$R_1 = 30 \, \Omega$$

$$R_2 = 10 \, \Omega$$

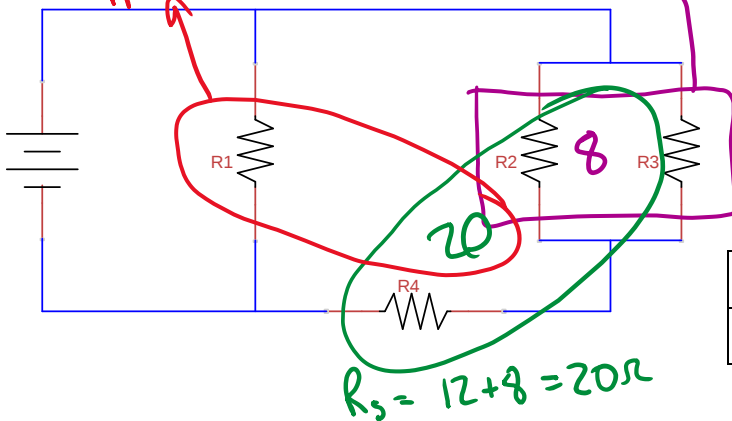
$$R_3 = 20 \, \Omega$$

$$R_4 = 15 \, \Omega$$

$$R_5 = 10 \, \Omega$$

$V_{\text{Total}} \text{ (V)}$	$I_{\text{Total}} \text{ (A)}$	$R_{\text{Total}} \text{ (}\Omega\text{)}$
100.0	2.5 A	40

$$\frac{1}{R_p} = \frac{1}{5} + \frac{1}{20} = .75 \quad R_p = \frac{1}{.75} = 4 \, \Omega$$



$$R_1 = 5 \, \Omega$$

$$R_2 = 10 \, \Omega$$

$$R_3 = 40 \, \Omega$$

$$R_4 = 12 \, \Omega$$

$V_{\text{Total}} \text{ (V)}$	$I_{\text{Total}} \text{ (A)}$	$R_{\text{Total}} \text{ (}\Omega\text{)}$
125.0	31.25 A	4 Ω