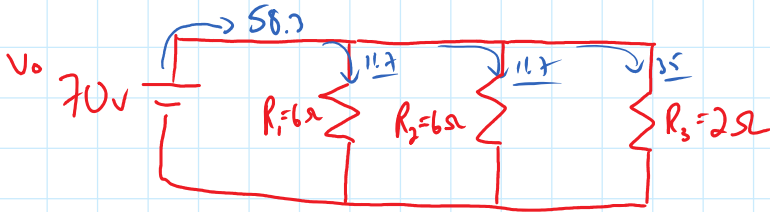


V, I, R, in a Series and Parallel Circuit

Thursday, May 18, 2017 8:58 AM



$$V_0 = 70V \quad I_0 = 58.3 \quad R_{eq} = 1.2\Omega$$

$$V_1 = 70V \quad I_1 = 11.7A \quad R_1 = 6\Omega$$

$$V_2 = 70V \quad I_2 = 11.7A \quad R_2 = 6\Omega$$

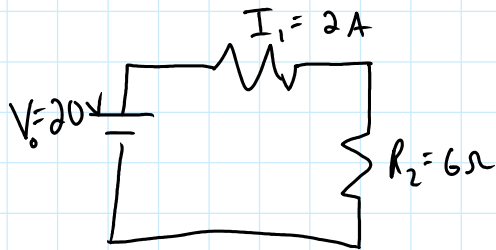
$$V_3 = 70V \quad I_3 = 3A \quad R_3 = 2\Omega$$

$$V = IR, \quad I = \frac{V}{R}, \quad R = \frac{V}{I}$$

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

$$= \frac{1}{6} + \frac{1}{6} + \frac{1}{2} = \frac{2}{3} + \frac{1}{2} = \frac{4}{6} + \frac{3}{6} = \frac{7}{6}$$

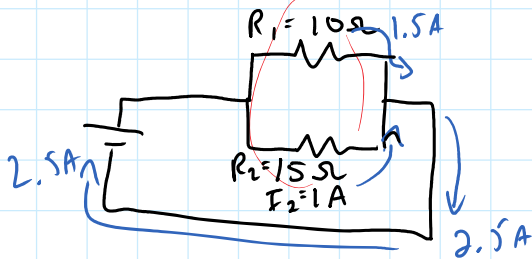
$$R_{eq} = 1.2\Omega$$



$$V_0 = 20V \quad I_0 = 2A \quad R_{eq} = 10\Omega$$

$$V_1 = 8V \quad I_1 = 2A \quad R_1 = 4\Omega$$

$$V_2 = 12V \quad I_2 = 2A \quad R_2 = 6\Omega$$

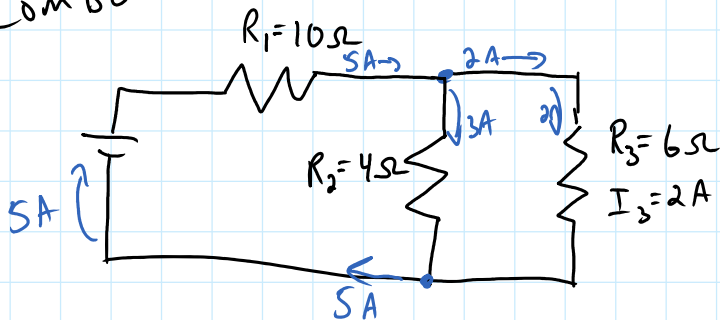


$$V_0 = 15V \quad I_0 = 2.5A \quad R_{eq} = 6\Omega$$

$$V_1 = 15V \quad I_1 = 1.5A \quad R_1 = 10\Omega$$

$$V_2 = 15V \quad I_2 = 1A \quad R_2 = 15\Omega$$

Combo



$$V_0 = 62V \quad I_0 = 5A \quad R_{eq} = 12.4\Omega$$

$$V_1 = 50V \quad I_1 = 5A \quad R_1 = 10\Omega$$

$$V_2 = 12V \quad I_2 = 3A \quad R_2 = 4\Omega$$

$$V_3 = 12V \quad I_3 = 2A \quad R_3 = 6\Omega$$

$\left. \begin{matrix} \frac{1}{4} + \frac{1}{6} \\ R_9 = 2.4 \end{matrix} \right\}$

P.2 & P.4 (#7 trick, trick) 7) 10Ω 8) V₃ = 6V 9) 1.5A 10) 3A