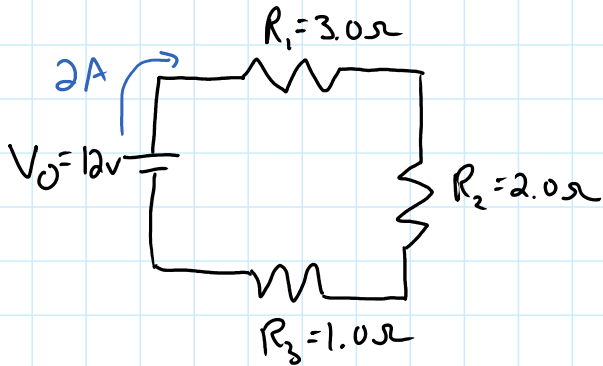


Determining V, I, R in a Circuit

Tuesday, May 16, 2017 10:08 AM



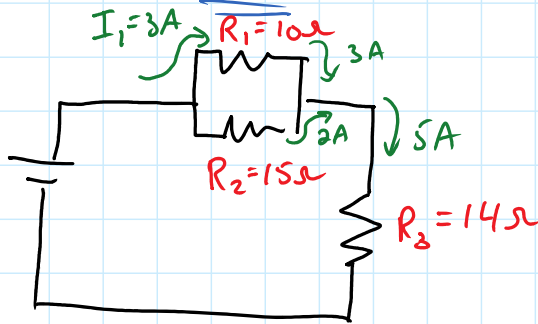
$$V_0 = 12V \quad I_0 = \frac{V}{R} = \frac{12}{6} = 2A \quad R_{eq} = 6.0\Omega$$

$$V_1 = 6.0V \quad I_1 = 2A \quad R_1 = 3.0\Omega$$

$$V_2 = 4.0V \quad I_2 = 2A \quad R_2 = 2.0\Omega$$

$$V_3 = 2.0V \quad I_3 = 2A \quad R_3 = 1.0\Omega$$

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



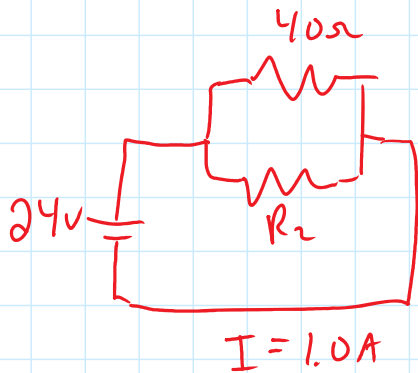
$$V_0 = 100V \quad I_0 = 5A \quad R_{eq} = 20\Omega$$

$$V_1 = 30V \quad I_1 = 3A \quad R_1 = 10\Omega$$

$$V_2 = 30V \quad I_2 = 2A \quad R_2 = 15\Omega$$

$$V_3 = 70V \quad I_3 = 5A \quad R_3 = 14\Omega$$

3)



$$V_0 = 24V \quad I_0 = 1.0A \quad R_{eq} = 24\Omega$$

$$V_1 = 24V \quad I_1 = 0.6A \quad R_1 = 40\Omega$$

$$V_2 = 24V \quad I_2 = 0.4A \quad R_2 = 60\Omega$$

$$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2}$$

$$\frac{1}{24} = \frac{1}{40} + \frac{1}{R_2} \quad R_2 = 60\Omega$$

P.2 finish, P.4 all of it.

P.4 7) 10Ω 8) 6.0V 9) 1.5A 10) 3.0A