

Armstrong

$V = 120V$
 $P_1 R_t = 0.9677$
 $P_2 R_t = 1.3$
 $P_3 R_t = 1.875$
 $R_t = 19.176041$
 $I_t = 6.257808898$
 $V_1 = 25.03123559$
 $A_3 = 31.6562548$
 $V_2 = 94.96876$
 $A_5 = 6.257808898$
 $V_{R5} = 37.56$
 $V_4 = 57.41$

$$P_1 R_t = \frac{1}{\frac{1}{0.9677} + \frac{1}{0.2 + \frac{1}{\frac{1}{0.3} + \frac{1}{0.5}}}}$$

$$P_2 R_t = \frac{1}{\frac{1}{1.3} + \frac{1}{4}}$$

$$P_3 R_t = \frac{1}{\frac{1}{0.75} + \frac{1}{\frac{1}{0.53} + 0.2}}$$

$$V_4 = 94.96876 - 37.56 = 57.41$$

$$A_7 = \frac{V}{R} = I$$

$$A_3 = \frac{0.967 \times 6.26}{3} = 2.013A$$

$$V_{p2} =$$

$$V_3 = V = IR$$

$$6.25 \times 1.3 = 8.13V$$

$$6.26 \times 1.33 = 8.33$$

$$R_t = 4 + 0.9677 + 6 + 1.3 + 5 + 1.875$$

$$I_t = \frac{120}{19.176041}$$

$$V_1 = 6.26 \times 4$$

$$V_4 = 6.26 \times 5 = 31.3$$

$$V_5 = 6.25 \times 1.875 = 11.7$$

$$A_7 = \frac{6.26}{6} = 1.043$$

$$A_3 = V = IR$$

$$94.96876 = I \times 3$$

$$\frac{94.96876}{3} = I$$

$$31.6562548$$

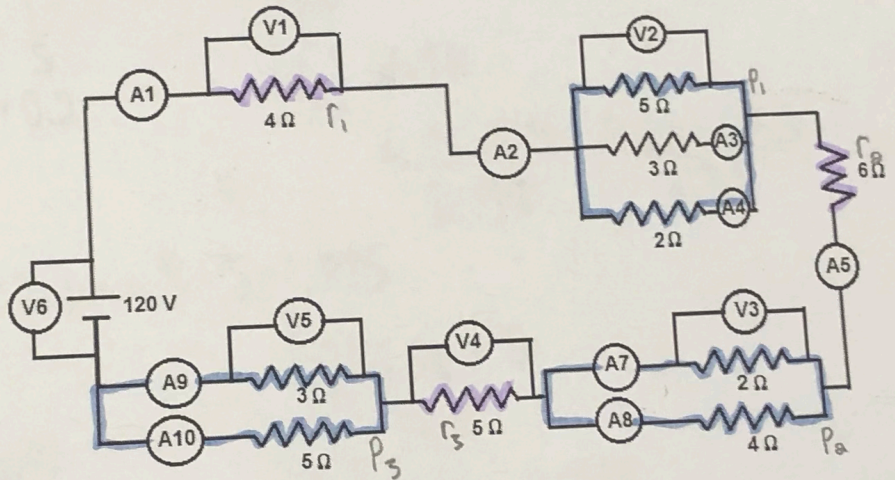
$$A_8 = 0.967 \times 6.26$$

$$A_5 = A_1$$

Combination Circuits Practice Problem

Find the values listed below.

A1	<u>6.26A</u>	
A3	<u>2.013A</u>	
A5	<u>6.26A</u>	
A7	<u>1.043A</u>	4.165A
A8	<u>2.08A</u>	x
A10	<u>2.34A</u>	x
V1	<u>25.03V</u>	
V2	<u>94.97V</u>	x 6.06V
V3	<u>8.13V</u>	x 8.33
V4	<u>31.3V</u>	
V5	<u>11.7V</u>	
V6	<u>120V</u>	



Corrections:

$$A_7 = 4.165$$

$$V_2 = 6.06$$

$$A_8 = 2.08$$

$$A_{10} = 2.34$$

$$V_2 = R_+ \times I_+$$
$$6.06 = 0.967 \times 6.26$$

$$A_7 = I = \frac{V}{R}$$

$$I = \frac{8.33}{2}$$

$$I = 4.165$$

$$A_8 = I = \frac{V}{R}$$

$$I = \frac{8.33}{4}$$

$$I = 2.08$$

$$A_{10} = I = \frac{V}{R}$$

$$I = \frac{11.7}{5}$$

$$I = 2.34$$