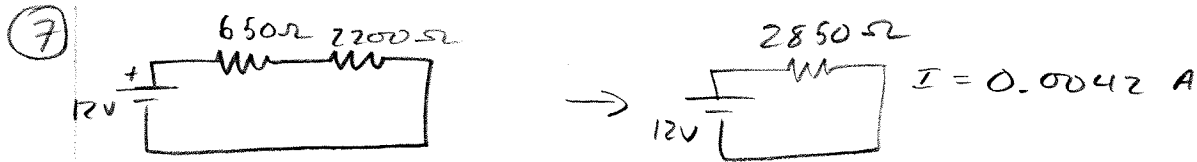


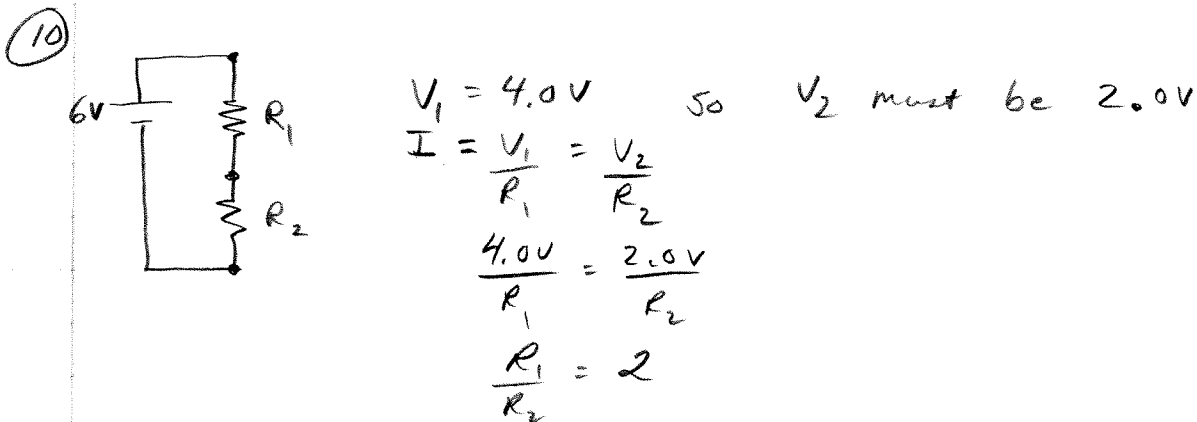
p547 5, 7, 9, 10, 16, 17, 20

⑤ Series: $4(240\Omega) = 960\Omega$
 parallel: $\frac{1}{R_{eq}} = \sum \frac{1}{R} = 4\left(\frac{1}{240\Omega}\right) = 0.01667$
 $R_{eq} = 60\Omega$



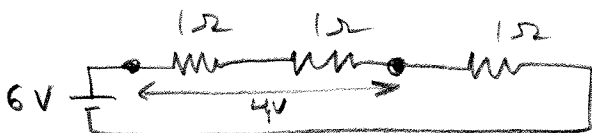
$V_{2200} = 9.3V$

⑨ (a) $R_{max} = 680\Omega + 940\Omega + 1.2 \times 10^3\Omega = 2820\Omega$
 (b) $\frac{1}{R_{min}} = \frac{1}{680\Omega} + \frac{1}{940\Omega} + \frac{1}{1.2 \times 10^3\Omega} = 0.00387$
 $R_{min} = 260\Omega$



So, $R_1 = 2R_2$
 if $R_2 = 1\Omega$, then $R_1 = 2\Omega$

So the circuit would look like this



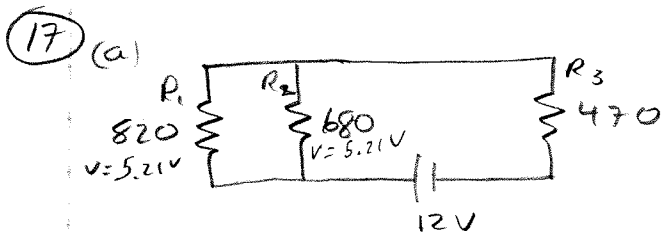
⑩

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

$$\frac{1}{320\Omega} = \frac{1}{480\Omega} + \frac{1}{R_2}$$

$$\frac{1}{R_2} = 0.00104$$

$$R_2 = 960\Omega$$

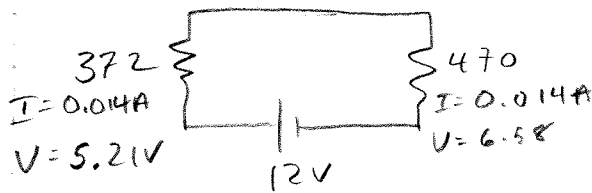


$$I_1 = 0.0064\text{ A}$$

$$V_1 = 5.21\text{ V}$$

$$I_2 = 0.0077\text{ A}$$

$$V_2 = 5.21\text{ V}$$



$$I_3 = 0.014\text{ A}$$

$$V_3 = 6.58\text{ V}$$

