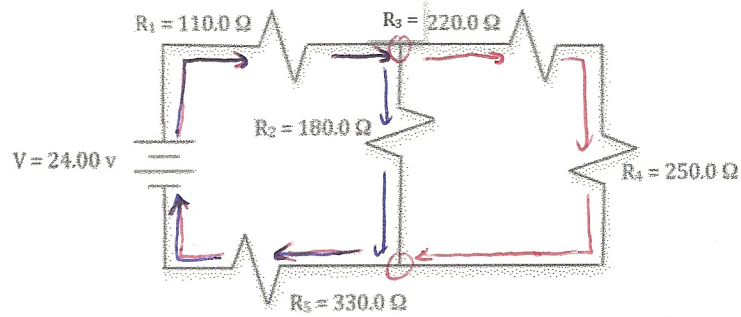


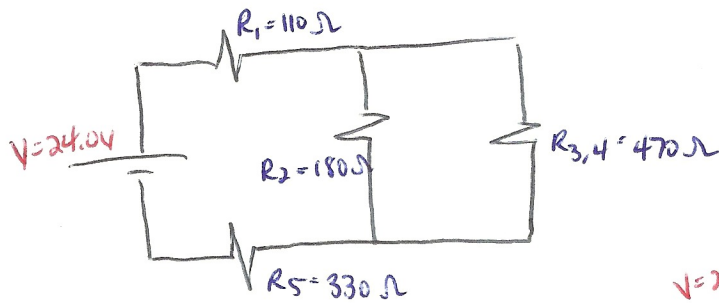
Example 13

For the circuit below:

- Find the Equivalent Resistance (R_{eq})
- Find the total current at the battery.
- Find the current and voltage across each resistor.



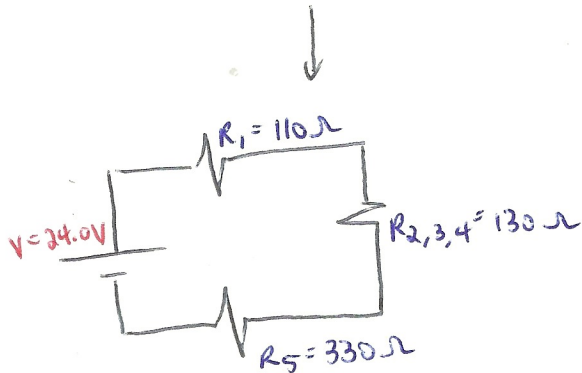
* Save resistors R_1 and R_5 for last



$$R_{3,4} = R_3 + R_4$$

$$R_{3,4} = 220 + 250$$

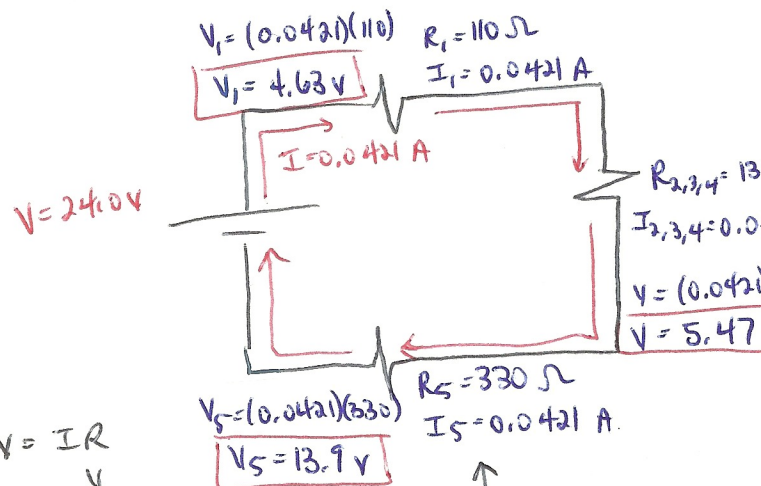
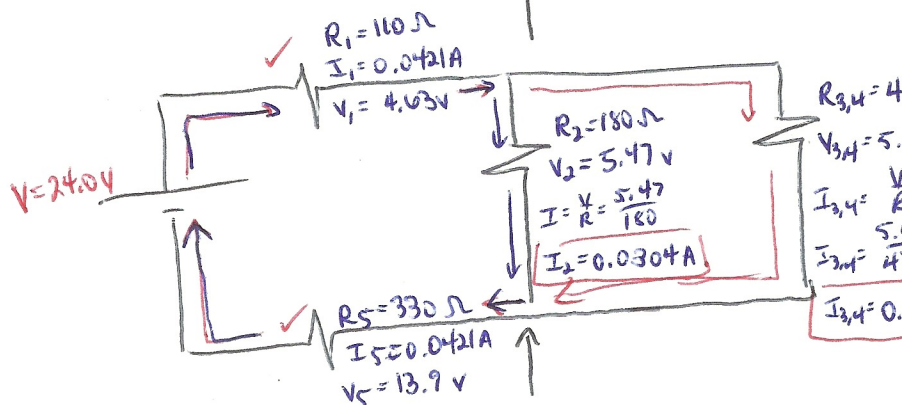
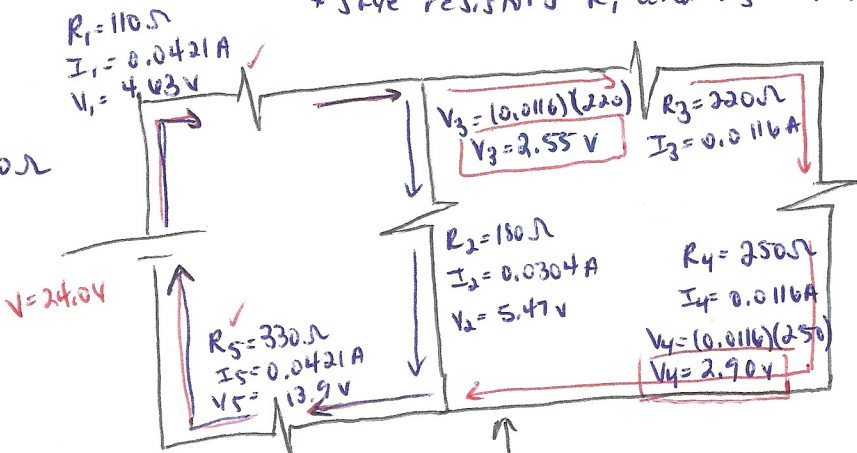
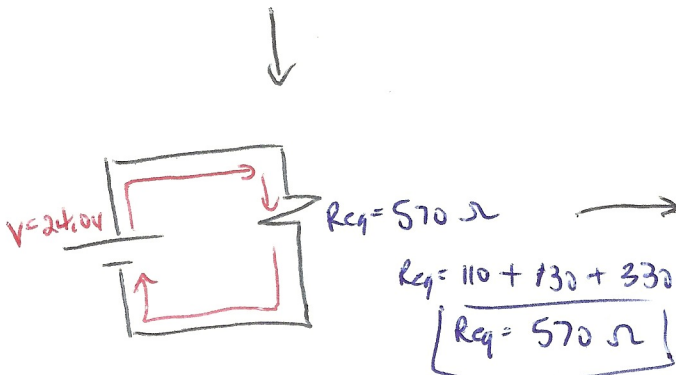
$$R_{3,4} = 470 \Omega$$



$$\frac{1}{R_{2,3,4}} = \frac{1}{R_2} + \frac{1}{R_{3,4}}$$

$$\frac{1}{R_{2,3,4}} = \frac{1}{180} + \frac{1}{470}$$

$$R_{2,3,4} = 130 \Omega$$



B.)

$$V = IR$$

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

$$I = \frac{24.0}{570}$$

$$I = 0.0421 \text{ A}$$