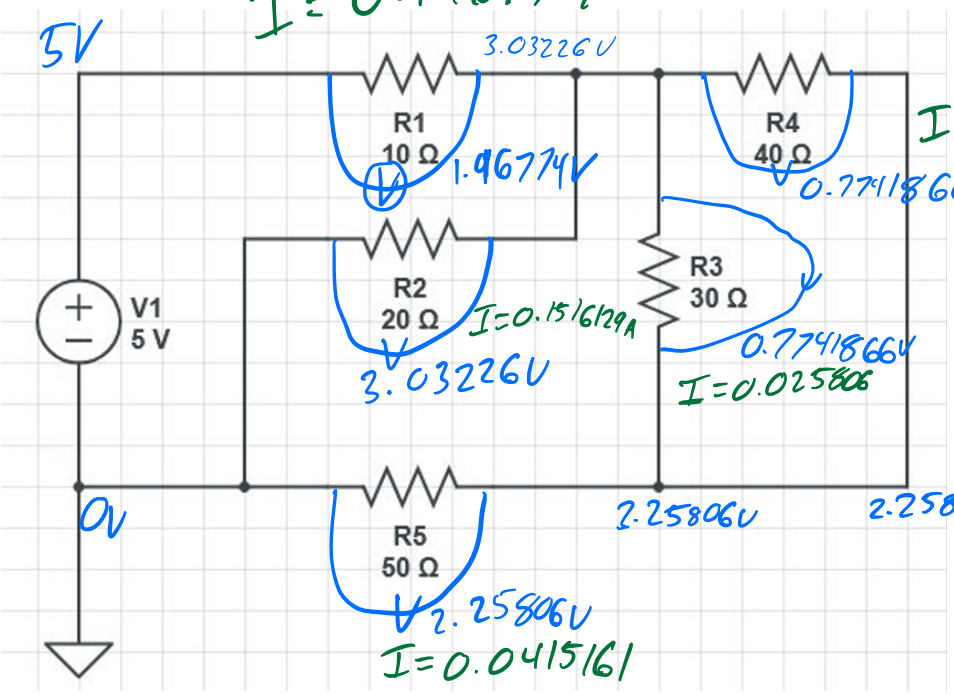
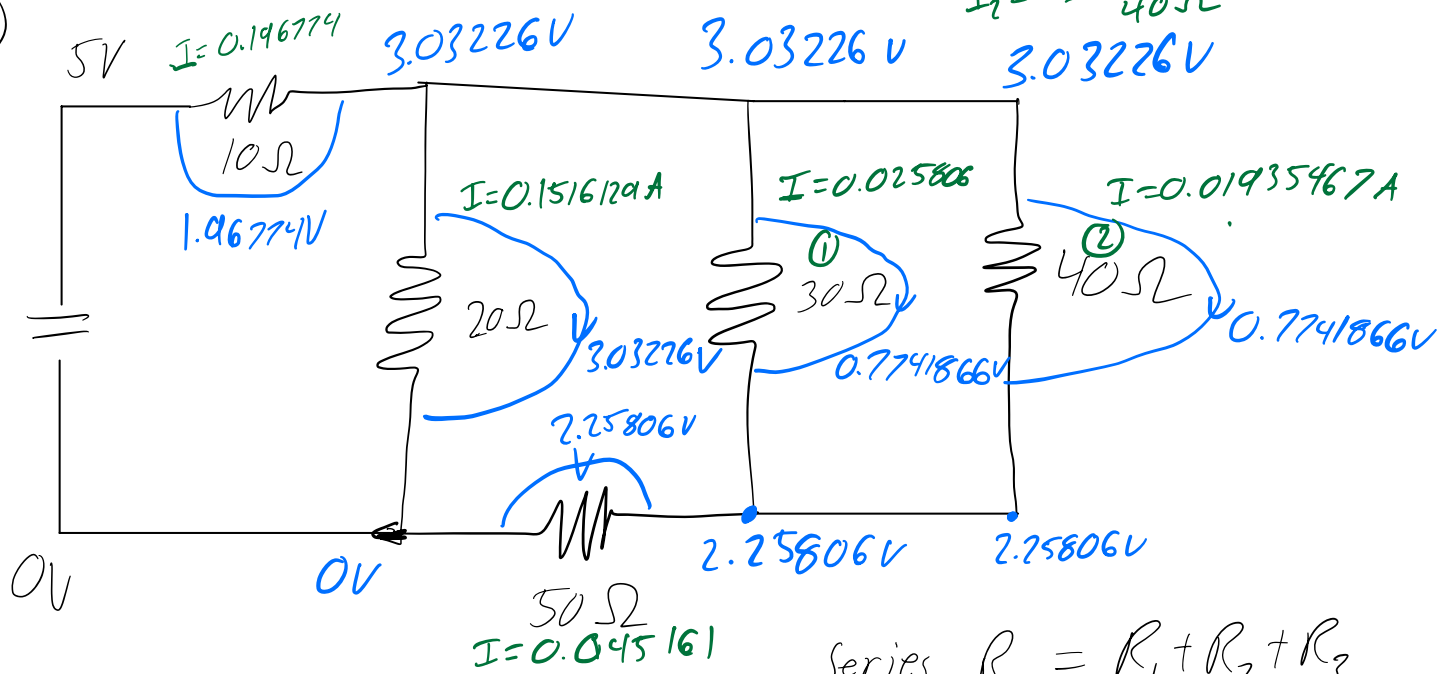
(1)



$I = \frac{V}{R}$ $I_1 = \frac{0.774186GV}{30\Omega} = 0.025806\,A$

$I_2 = \frac{0.774186GV}{40\Omega} = 0.0193547$

(2)

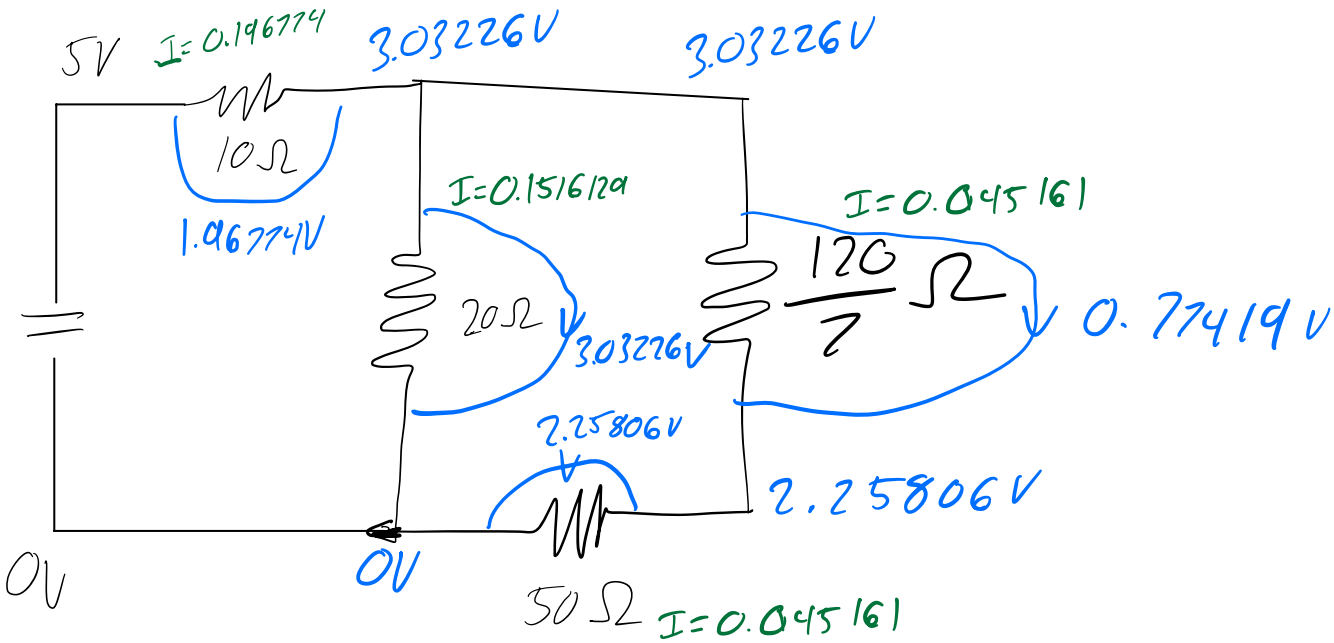


Series $R_{eq} = R_1 + R_2 + R_3$

Find I and V for every Parallel:

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

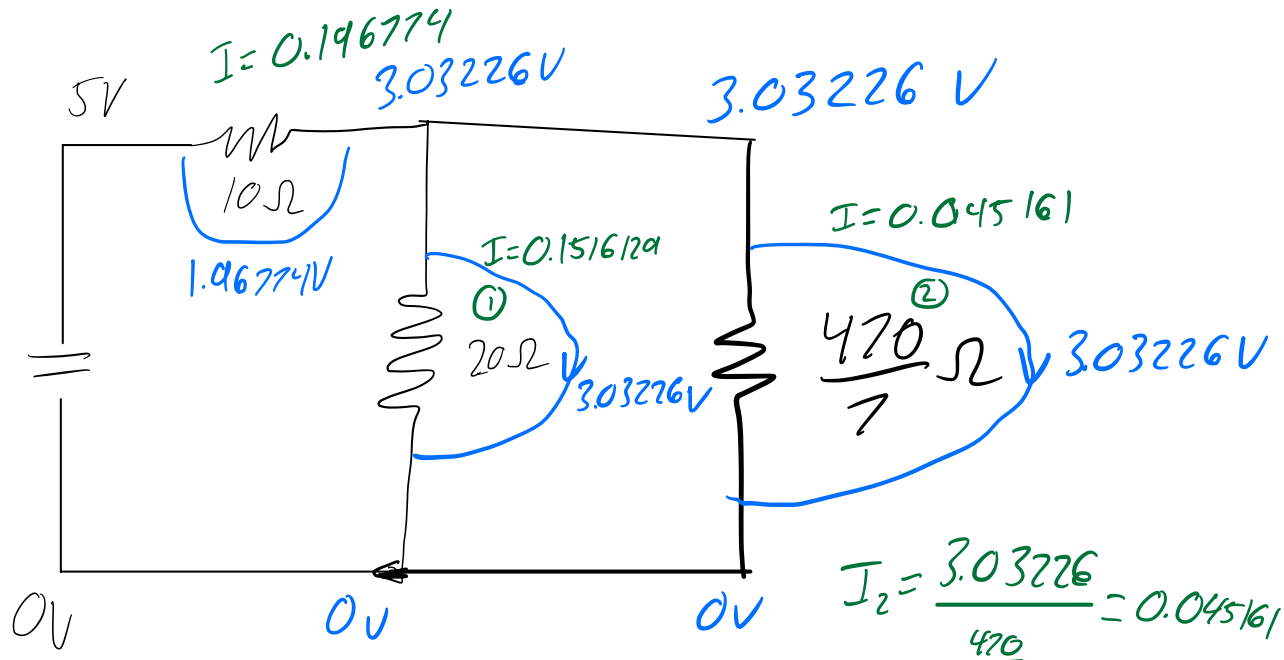
(3)



$$R_{eq} = \frac{1}{\frac{1}{30} + \frac{1}{40}} = \frac{120}{7}\,\Omega$$

$$\frac{4}{120} + \frac{3}{120} = \frac{7}{120}$$

(4)



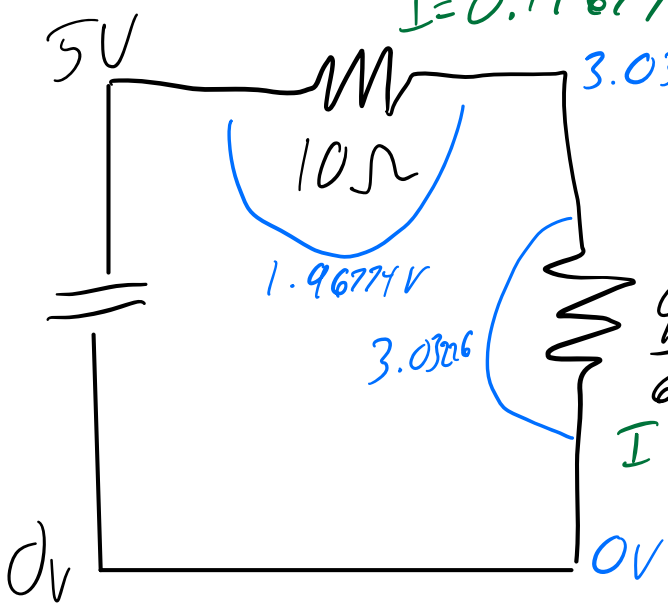
$I_2 = \frac{3.03226}{\frac{470}{7}} = 0.045161$

$I = \frac{V}{R}$ $\quad I_1 = \frac{3.03226}{20} = 0.151612$

$R_{eq} = \frac{120}{7}\Omega + \frac{350}{7}\Omega = \frac{470}{7}\Omega$

$V = (0.19677)(10) = 1.96774\ V$

(5.)

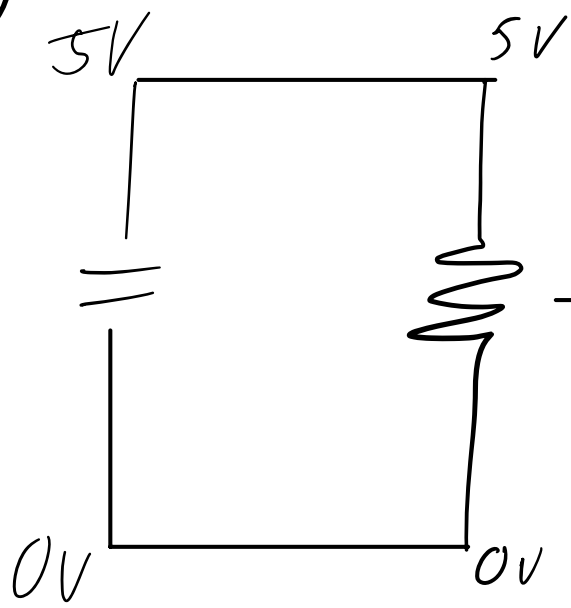


$R_{eq} = \frac{1}{\frac{1}{\frac{470}{7}} + \frac{1}{20}} = \frac{940}{61}$

$I = 0.19677A \quad \frac{7}{470} + \frac{1}{20} = \frac{61}{940}$

$V = \left(\frac{940}{61}\right) * 0.19677 = 3.03226$

6.



$\frac{1550}{61} \approx 25.41\Omega$

$R_{eq} = 10 + \frac{940}{61} = \frac{1550}{61} \approx 25.41\Omega$

$V = IR$

$V = 5V$

$I_{total} = \frac{5}{25.41} = 0.19677\,A$