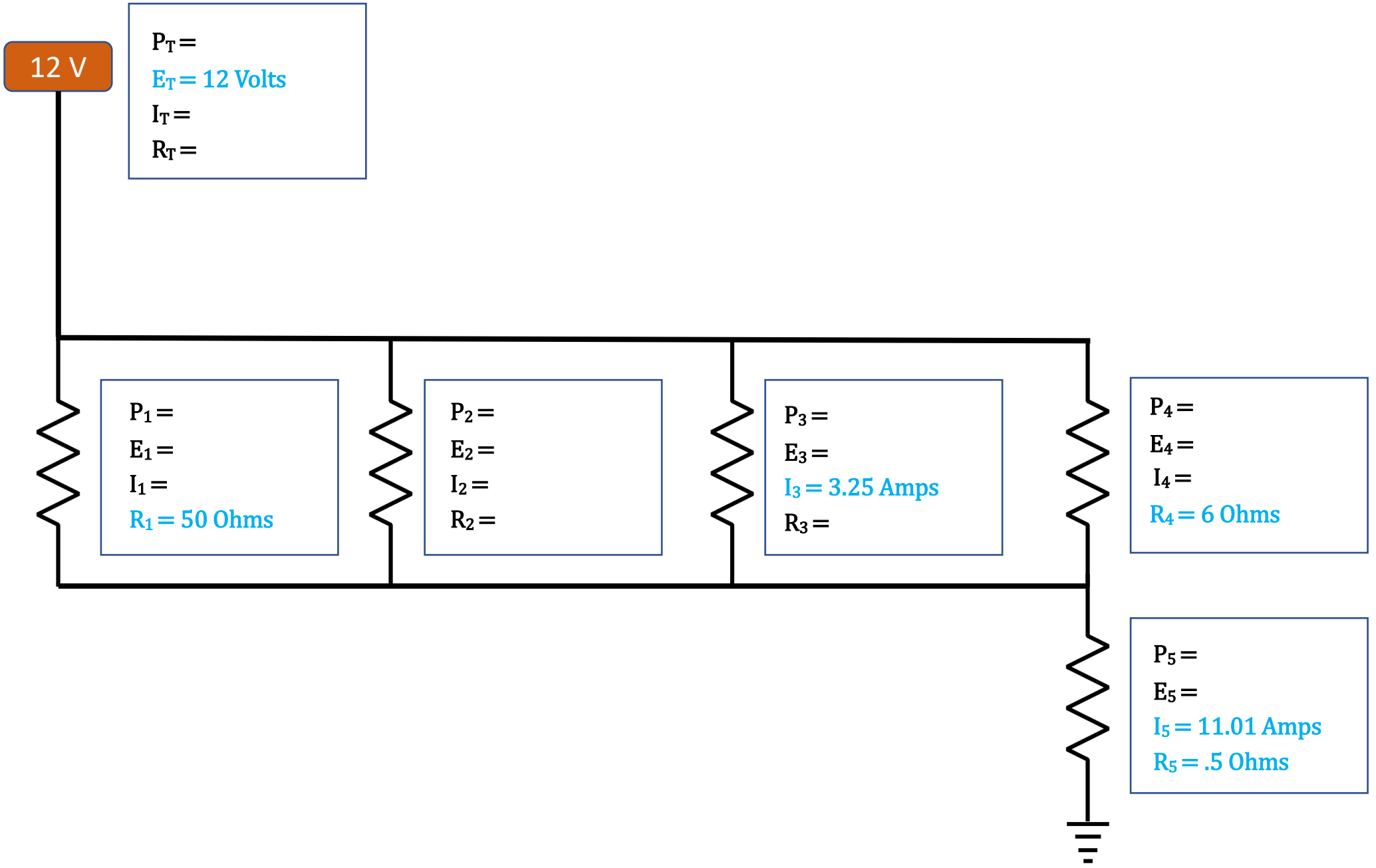
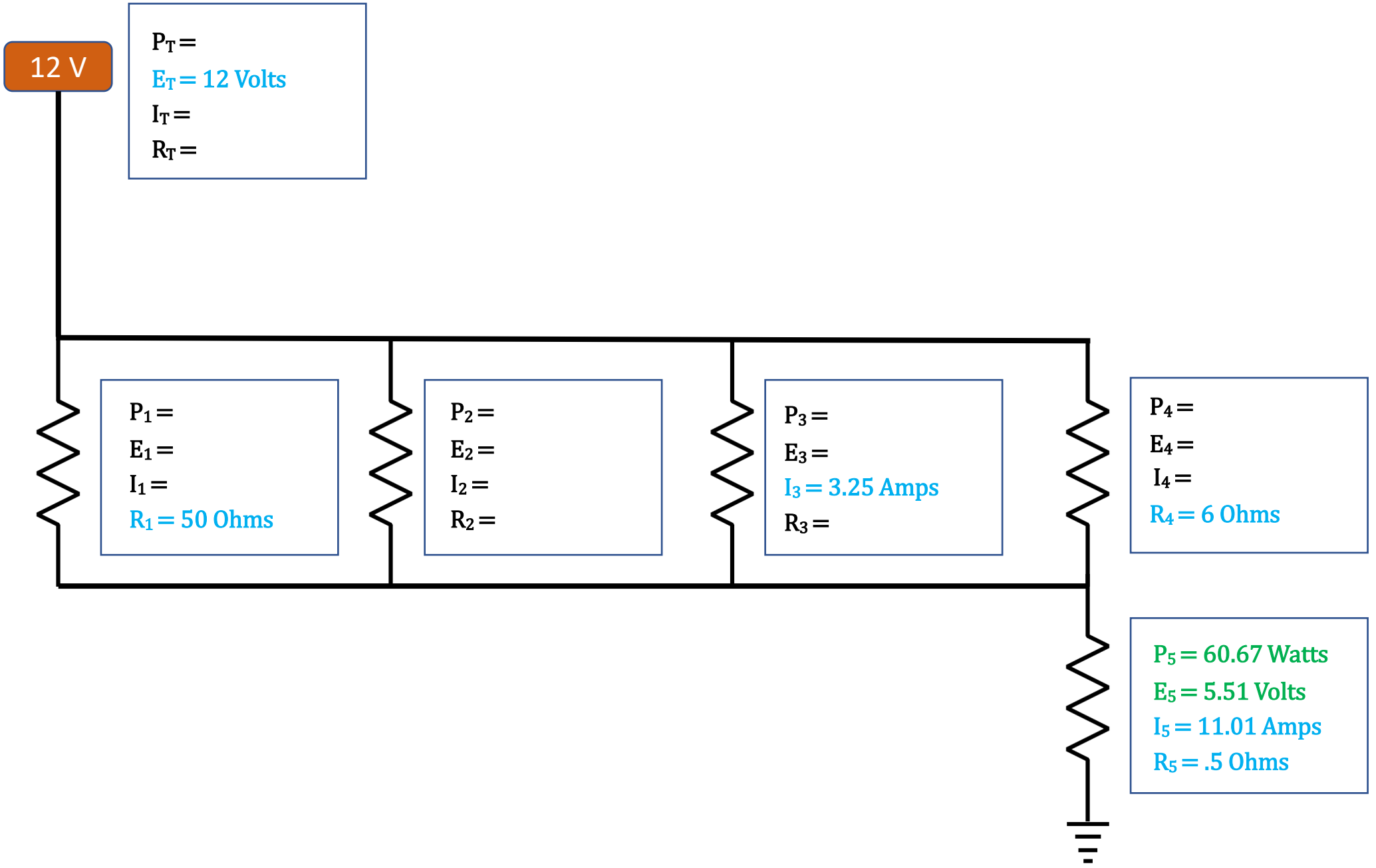
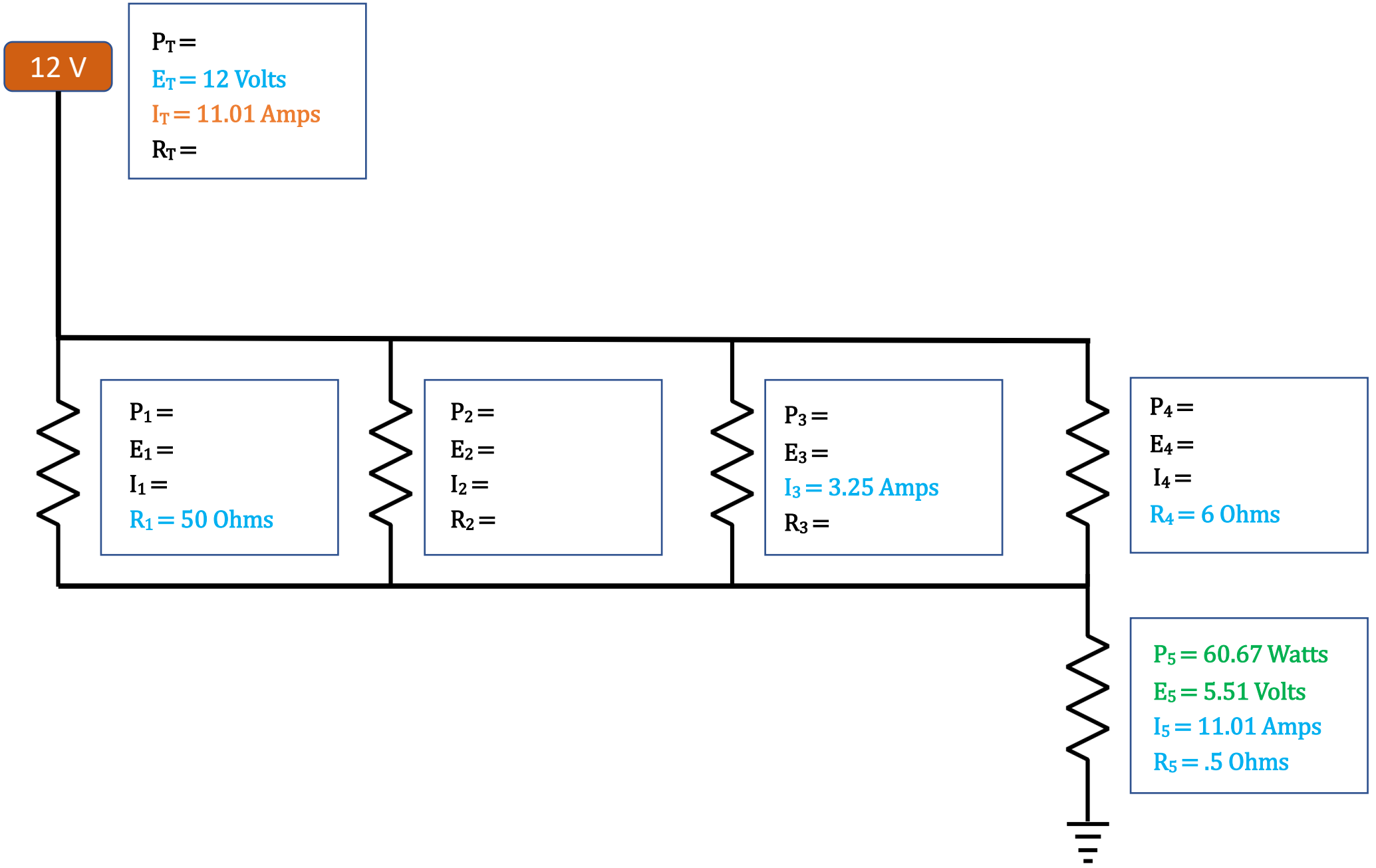
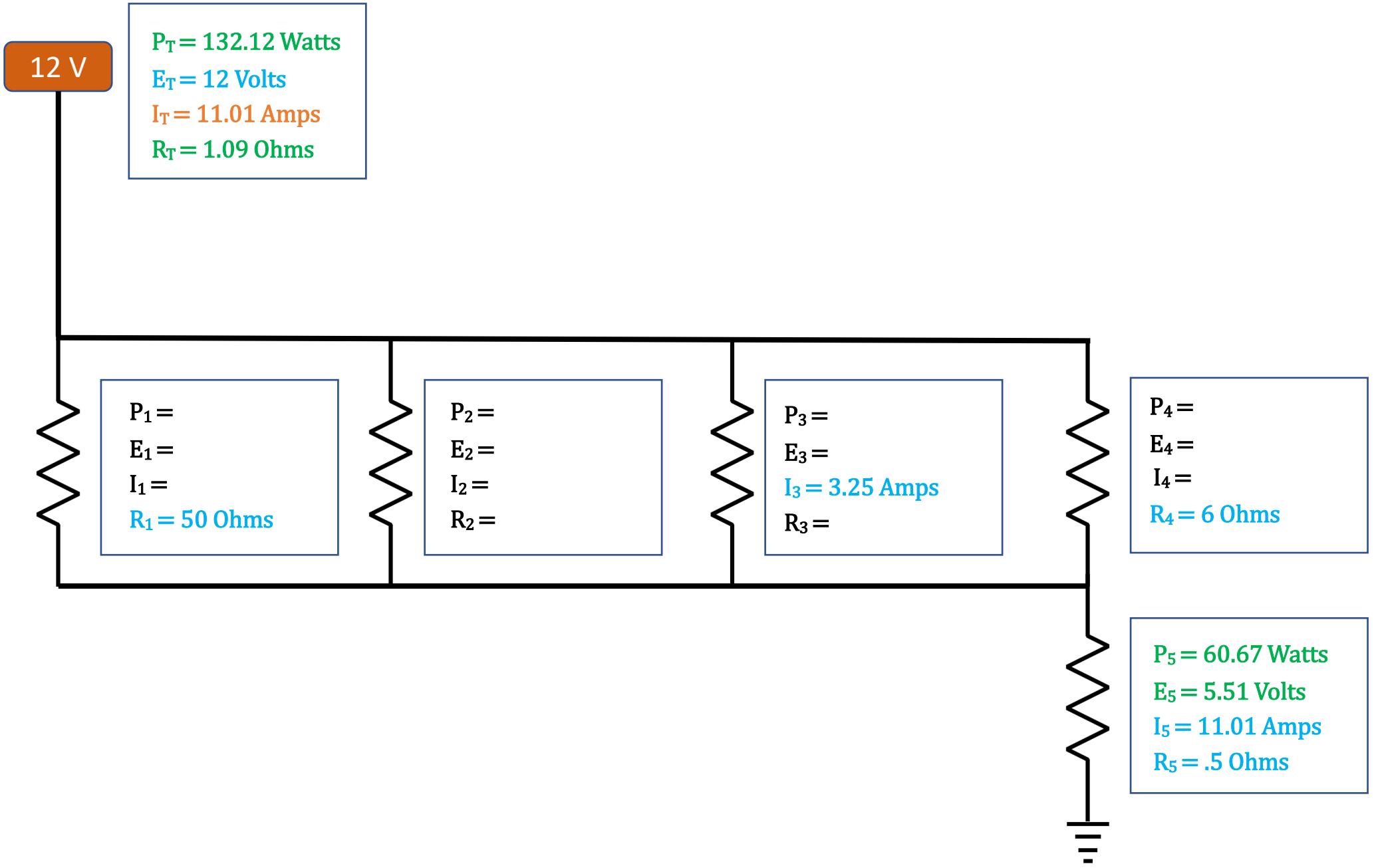
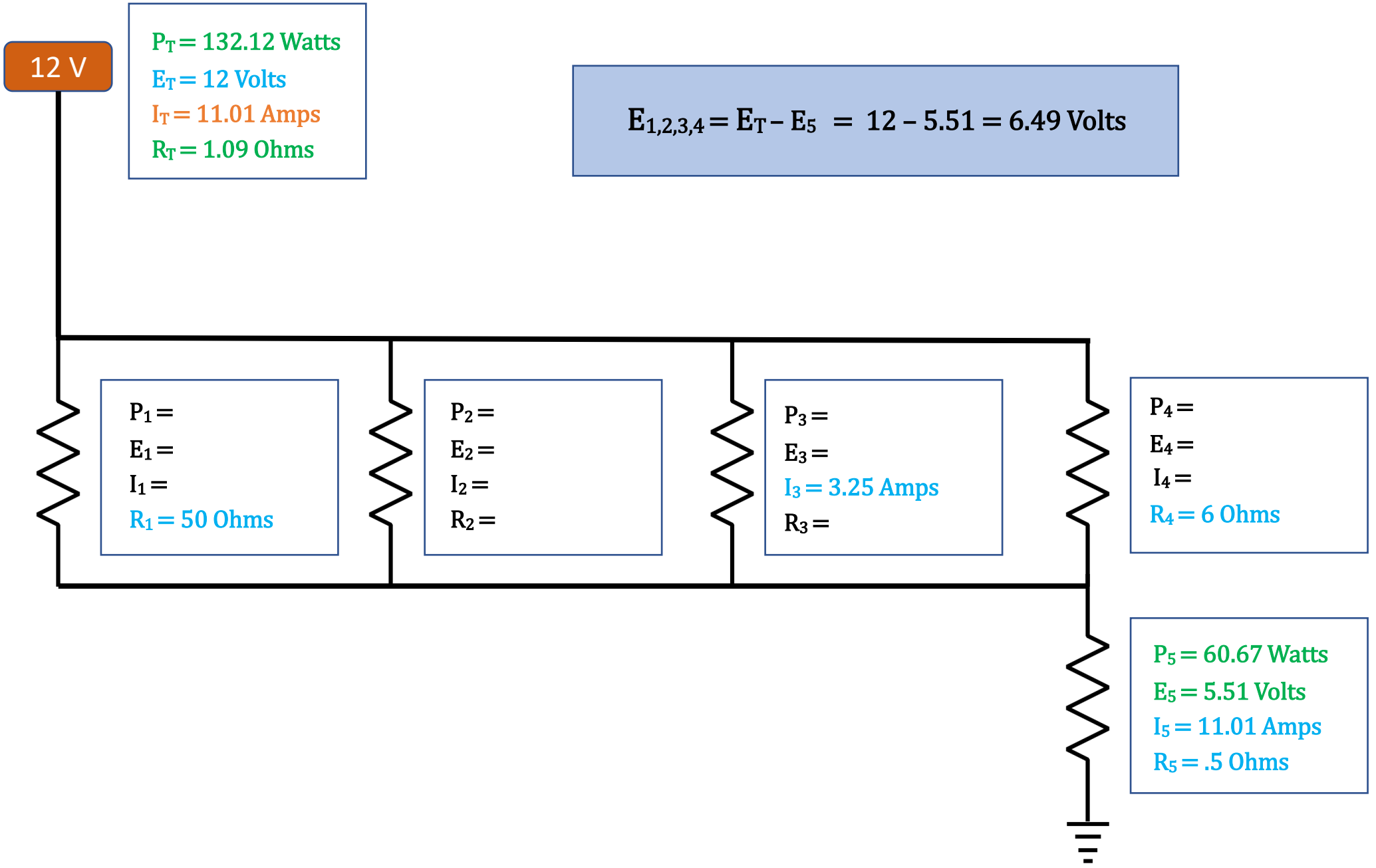
Series Parallel Math Example 4

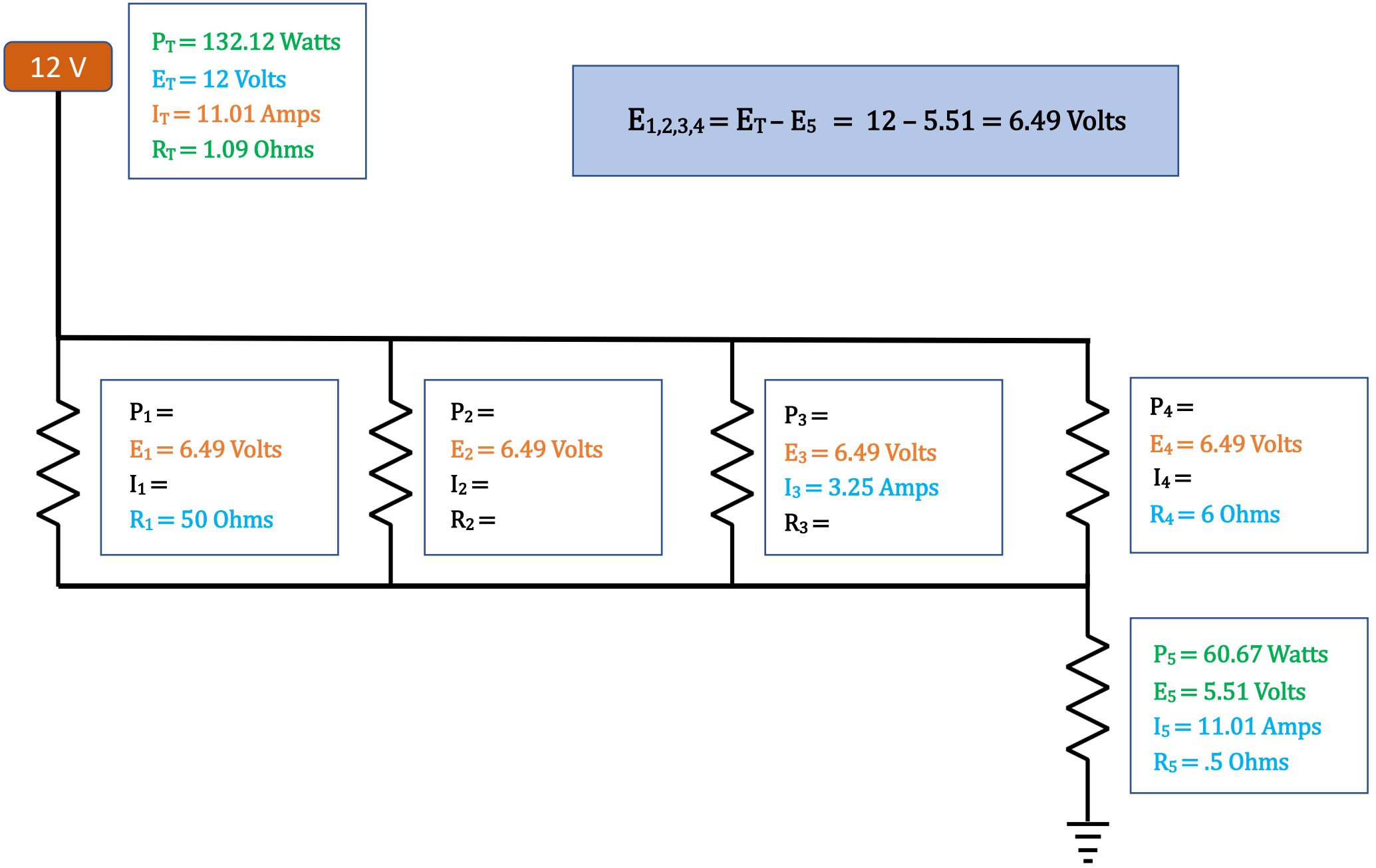

12 V
$P_T =$
$E_T = 12$ Volts
$I_T =$
$R_T =$
$P_1 =$
$E_1 =$
$I_1 =$
$R_1 = 50$ Ohms
$P_2 =$
$E_2 =$
$I_2 =$
$R_2 =$
$P_3 =$
$E_3 =$
$I_3 = 3.25$ Amps
$R_3 =$
$P_4 =$
$E_4 =$
$I_4 =$
$R_4 = 6$ Ohms
$P_5 =$
$E_5 =$
$I_5 = 11.01$ Amps
$R_5 = .5$ Ohms

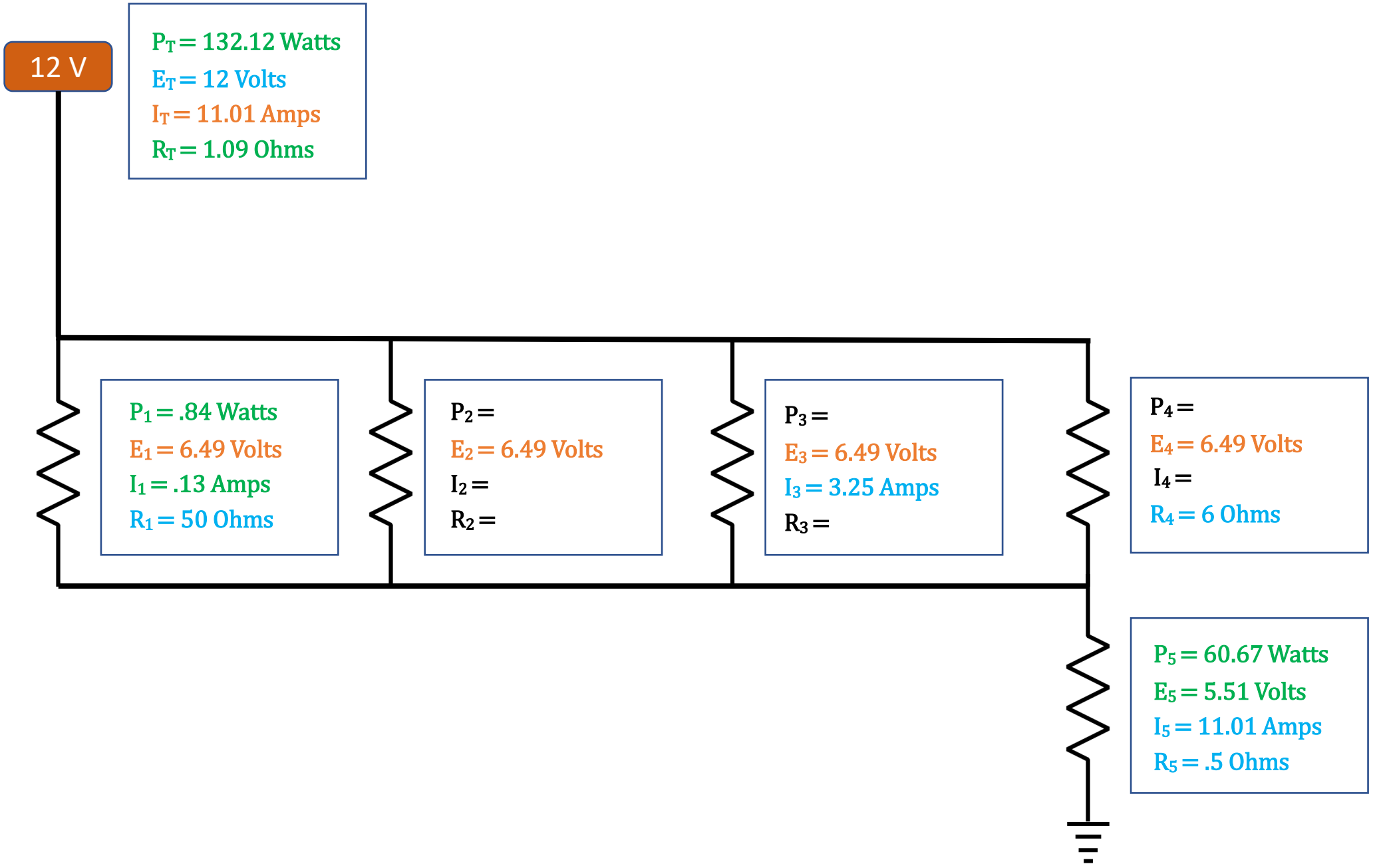

12 V
$P_T =$
$E_T = 12$ Volts
$I_T =$
$R_T =$
$P_1 =$
$E_1 =$
$I_1 =$
$R_1 = 50$ Ohms
$P_2 =$
$E_2 =$
$I_2 =$
$R_2 =$
$P_3 =$
$E_3 =$
$I_3 = 3.25$ Amps
$R_3 =$
$P_4 =$
$E_4 =$
$I_4 =$
$R_4 = 6$ Ohms
$P_5 = 60.67$ Watts
$E_5 = 5.51$ Volts
$I_5 = 11.01$ Amps
$R_5 = .5$ Ohms

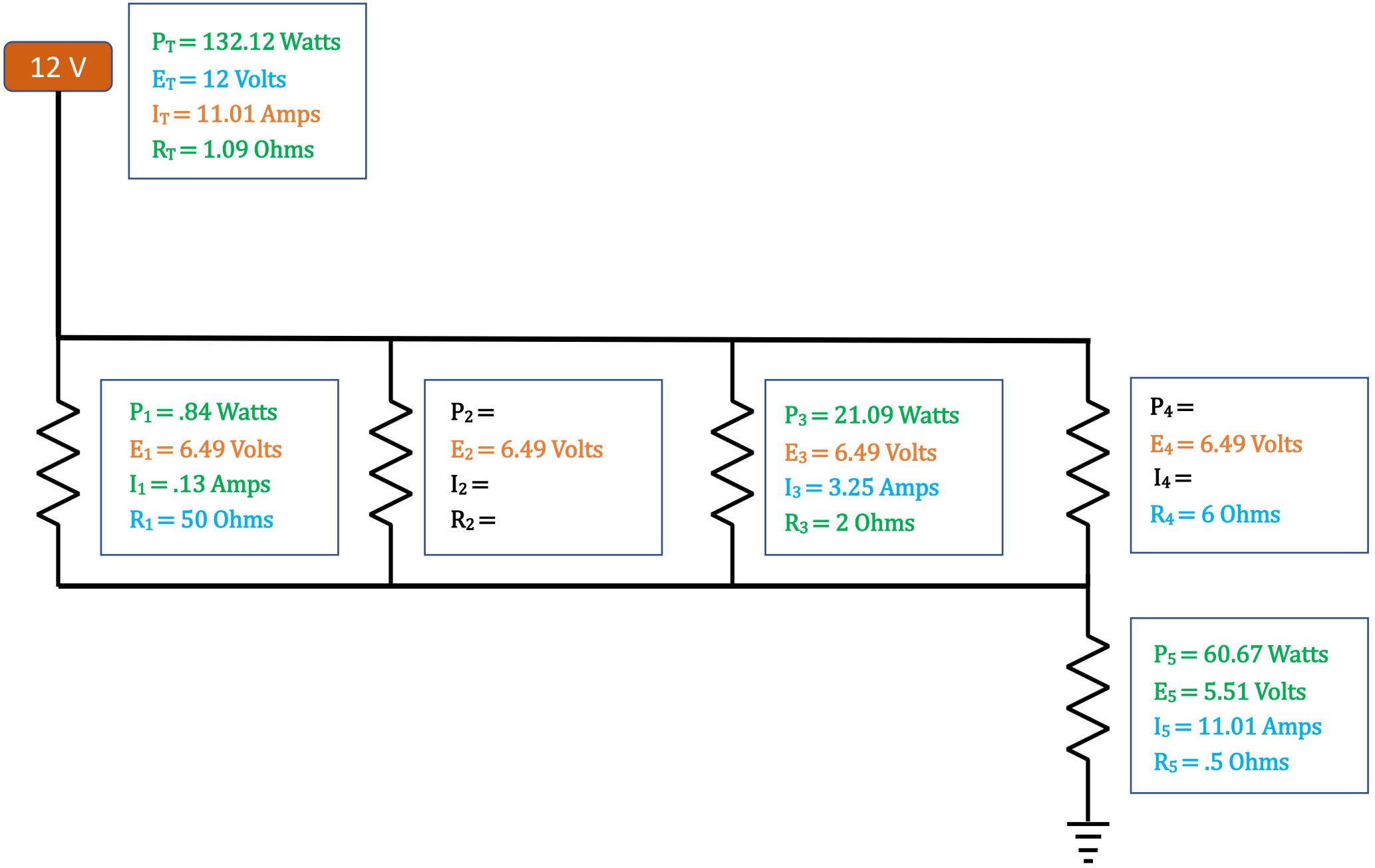

12 V
$P_T =$
$E_T = 12$ Volts
$I_T = 11.01$ Amps
$R_T =$
$P_1 =$
$E_1 =$
$I_1 =$
$R_1 = 50$ Ohms
$P_2 =$
$E_2 =$
$I_2 =$
$R_2 =$
$P_3 =$
$E_3 =$
$I_3 = 3.25$ Amps
$R_3 =$
$P_4 =$
$E_4 =$
$I_4 =$
$R_4 = 6$ Ohms
$P_5 = 60.67$ Watts
$E_5 = 5.51$ Volts
$I_5 = 11.01$ Amps
$R_5 = .5$ Ohms

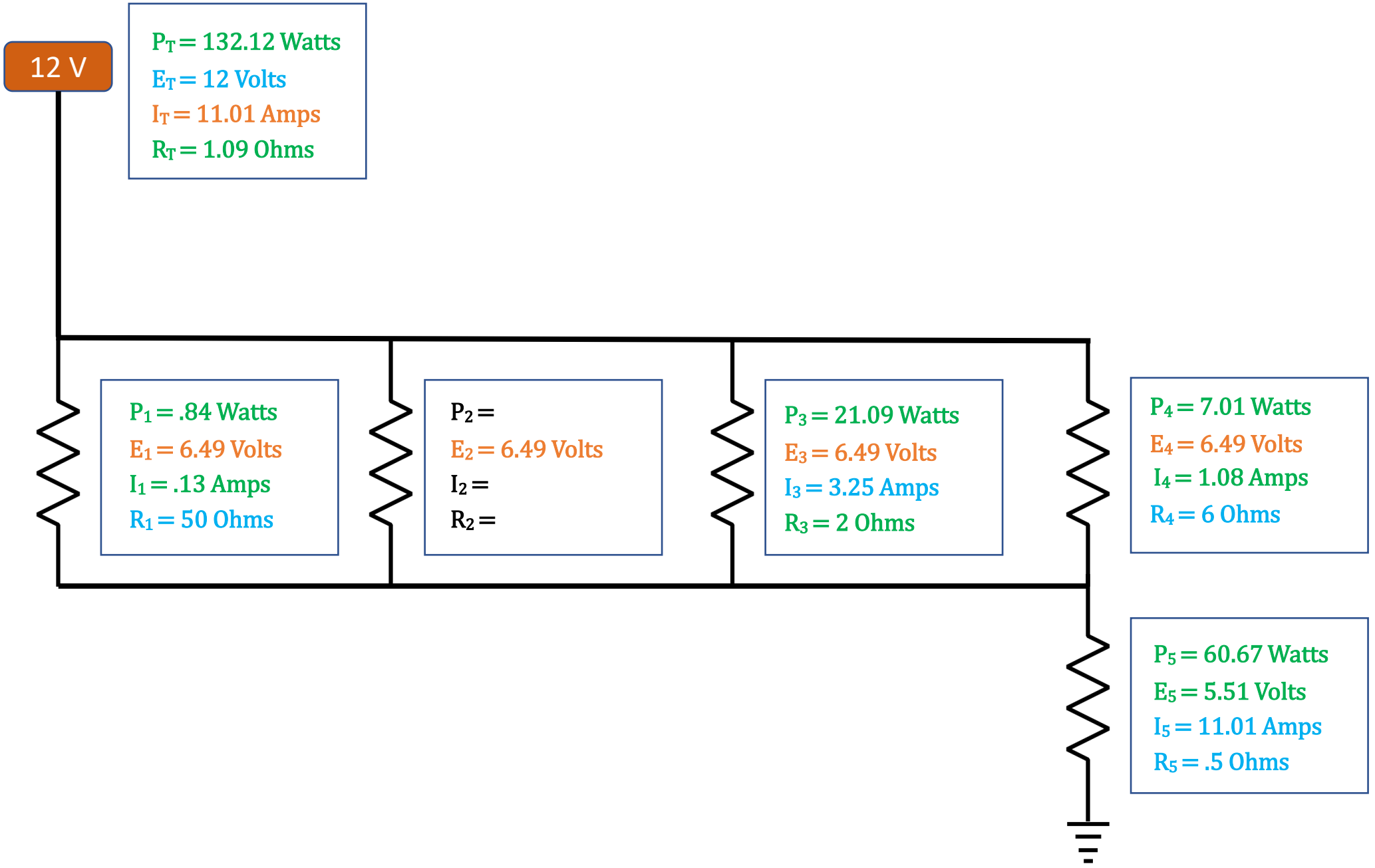

12 V
$P_T = 132.12$ Watts
$E_T = 12$ Volts
$I_T = 11.01$ Amps
$R_T = 1.09$ Ohms
$P_1 =$
$E_1 =$
$I_1 =$
$R_1 = 50$ Ohms
$P_2 =$
$E_2 =$
$I_2 =$
$R_2 =$
$P_3 =$
$E_3 =$
$I_3 = 3.25$ Amps
$R_3 =$
$P_4 =$
$E_4 =$
$I_4 =$
$R_4 = 6$ Ohms
$P_5 = 60.67$ Watts
$E_5 = 5.51$ Volts
$I_5 = 11.01$ Amps
$R_5 = .5$ Ohms

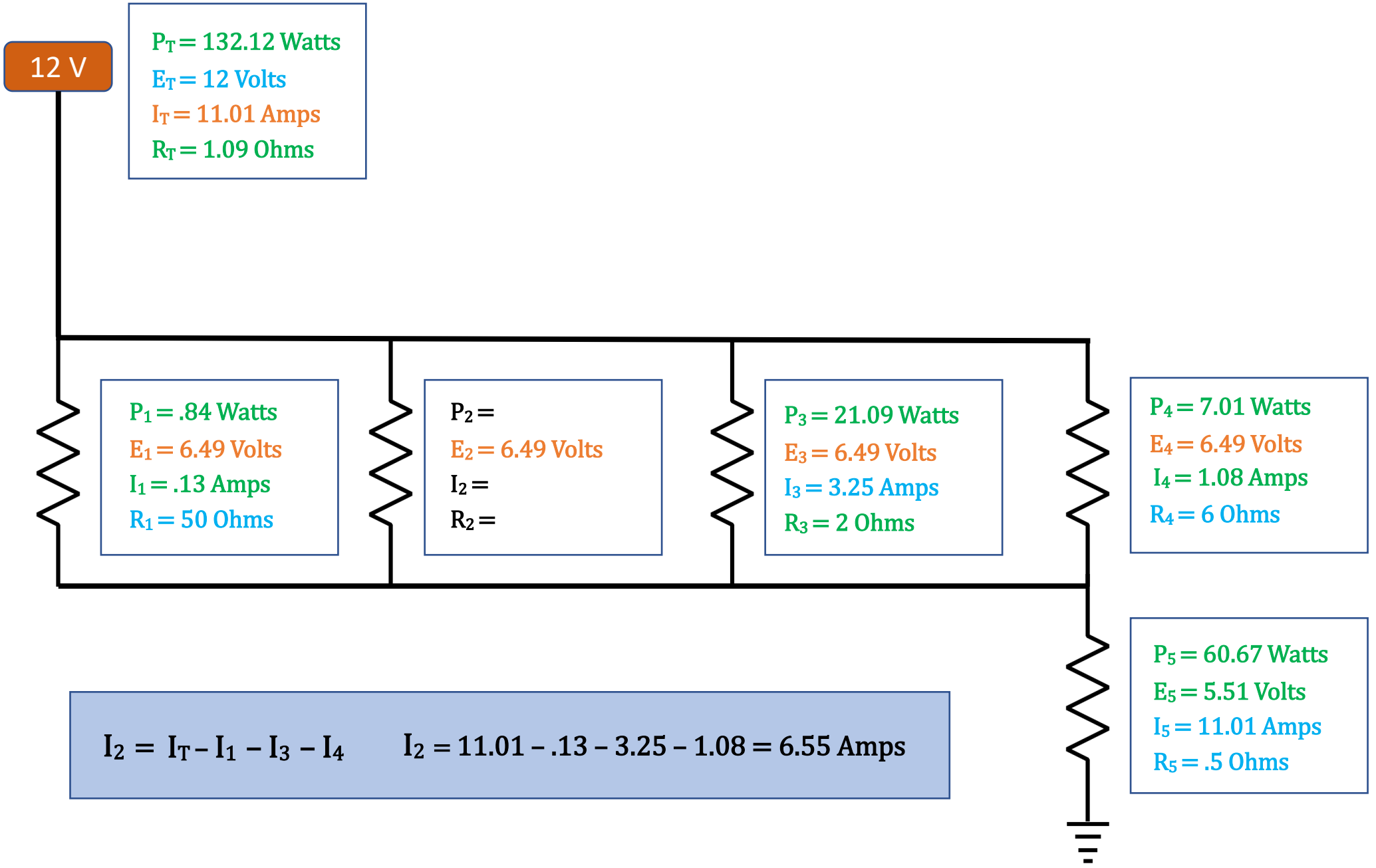

12 V
$P_T = 132.12$ Watts
$E_T = 12$ Volts
$I_T = 11.01$ Amps
$R_T = 1.09$ Ohms
$E_{1,2,3,4} = E_T - E_5 = 12 - 5.51 = 6.49$ Volts
$P_1 =$
$E_1 =$
$I_1 =$
$R_1 = 50$ Ohms
$P_2 =$
$E_2 =$
$I_2 =$
$R_2 =$
$P_3 =$
$E_3 =$
$I_3 = 3.25$ Amps
$R_3 =$
$P_4 =$
$E_4 =$
$I_4 =$
$R_4 = 6$ Ohms
$P_5 = 60.67$ Watts
$E_5 = 5.51$ Volts
$I_5 = 11.01$ Amps
$R_5 = .5$ Ohms

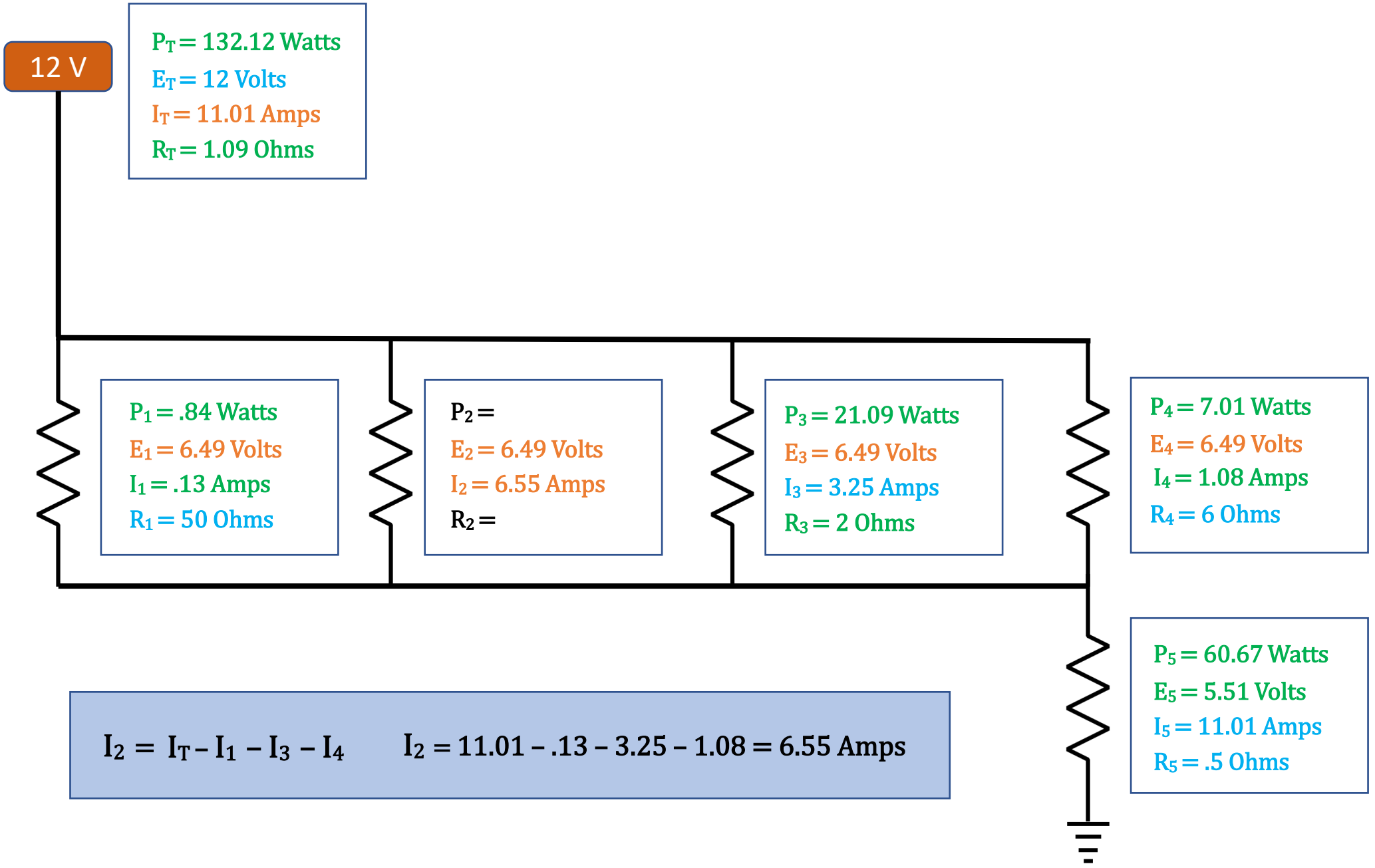

12 V
$P_T = 132.12$ Watts
$E_T = 12$ Volts
$I_T = 11.01$ Amps
$R_T = 1.09$ Ohms
$E_{1,2,3,4} = E_T - E_5 = 12 - 5.51 = 6.49$ Volts
$P_1 =$
$E_1 = 6.49$ Volts
$I_1 =$
$R_1 = 50$ Ohms
$P_2 =$
$E_2 = 6.49$ Volts
$I_2 =$
$R_2 =$
$P_3 =$
$E_3 = 6.49$ Volts
$I_3 = 3.25$ Amps
$R_3 =$
$P_4 =$
$E_4 = 6.49$ Volts
$I_4 =$
$R_4 = 6$ Ohms
$P_5 = 60.67$ Watts
$E_5 = 5.51$ Volts
$I_5 = 11.01$ Amps
$R_5 = .5$ Ohms

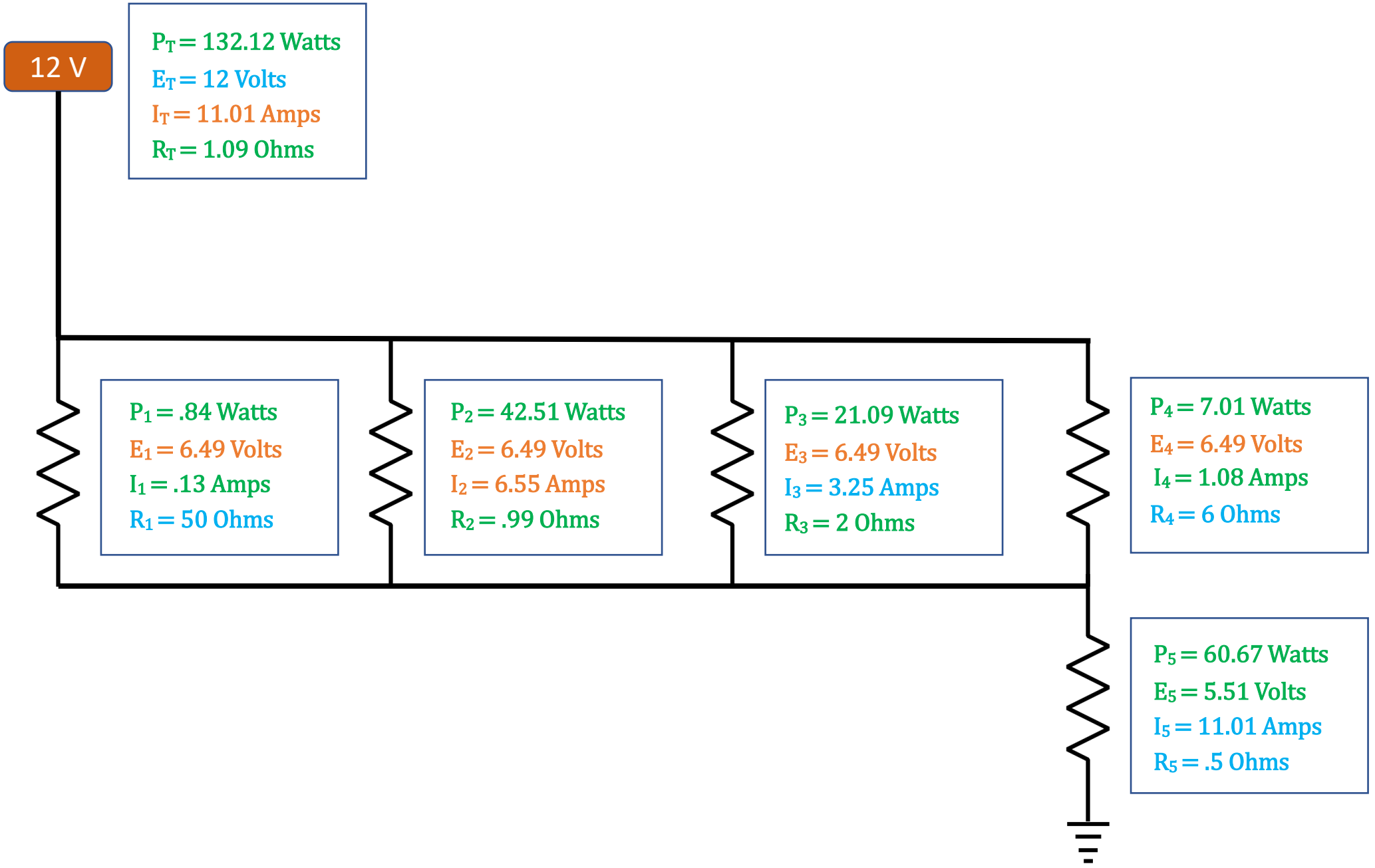

12 V
P_T = 132.12 Watts
E_T = 12 Volts
I_T = 11.01 Amps
R_T = 1.09 Ohms
P_1 = .84 Watts
E_1 = 6.49 Volts
I_1 = .13 Amps
R_1 = 50 Ohms
P_2 =
E_2 = 6.49 Volts
I_2 =
R_2 =
P_3 =
E_3 = 6.49 Volts
I_3 = 3.25 Amps
R_3 =
P_4 =
E_4 = 6.49 Volts
I_4 =
R_4 = 6 Ohms
P_5 = 60.67 Watts
E_5 = 5.51 Volts
I_5 = 11.01 Amps
R_5 = .5 Ohms


12 V
P_T = 132.12 Watts
E_T = 12 Volts
I_T = 11.01 Amps
R_T = 1.09 Ohms
P_1 = .84 Watts
E_1 = 6.49 Volts
I_1 = .13 Amps
R_1 = 50 Ohms
P_2 =
E_2 = 6.49 Volts
I_2 =
R_2 =
P_3 = 21.09 Watts
E_3 = 6.49 Volts
I_3 = 3.25 Amps
R_3 = 2 Ohms
P_4 =
E_4 = 6.49 Volts
I_4 =
R_4 = 6 Ohms
P_5 = 60.67 Watts
E_5 = 5.51 Volts
I_5 = 11.01 Amps
R_5 = .5 Ohms


12 V
$P_T = 132.12$ Watts
$E_T = 12$ Volts
$I_T = 11.01$ Amps
$R_T = 1.09$ Ohms
$P_1 = .84$ Watts
$E_1 = 6.49$ Volts
$I_1 = .13$ Amps
$R_1 = 50$ Ohms
$P_2 =$
$E_2 = 6.49$ Volts
$I_2 =$
$R_2 =$
$P_3 = 21.09$ Watts
$E_3 = 6.49$ Volts
$I_3 = 3.25$ Amps
$R_3 = 2$ Ohms
$P_4 = 7.01$ Watts
$E_4 = 6.49$ Volts
$I_4 = 1.08$ Amps
$R_4 = 6$ Ohms
$P_5 = 60.67$ Watts
$E_5 = 5.51$ Volts
$I_5 = 11.01$ Amps
$R_5 = .5$ Ohms


12 V
$P_T = 132.12$ Watts
$E_T = 12$ Volts
$I_T = 11.01$ Amps
$R_T = 1.09$ Ohms
$P_1 = .84$ Watts
$E_1 = 6.49$ Volts
$I_1 = .13$ Amps
$R_1 = 50$ Ohms
$P_2 =$
$E_2 = 6.49$ Volts
$I_2 =$
$R_2 =$
$P_3 = 21.09$ Watts
$E_3 = 6.49$ Volts
$I_3 = 3.25$ Amps
$R_3 = 2$ Ohms
$P_4 = 7.01$ Watts
$E_4 = 6.49$ Volts
$I_4 = 1.08$ Amps
$R_4 = 6$ Ohms
$P_5 = 60.67$ Watts
$E_5 = 5.51$ Volts
$I_5 = 11.01$ Amps
$R_5 = .5$ Ohms
$I_2 = I_T - I_1 - I_3 - I_4$
$I_2 = 11.01 - .13 - 3.25 - 1.08 = 6.55$ Amps


12 V
$P_T = 132.12$ Watts
$E_T = 12$ Volts
$I_T = 11.01$ Amps
$R_T = 1.09$ Ohms
$P_1 = .84$ Watts
$E_1 = 6.49$ Volts
$I_1 = .13$ Amps
$R_1 = 50$ Ohms
$P_2 =$
$E_2 = 6.49$ Volts
$I_2 = 6.55$ Amps
$R_2 =$
$P_3 = 21.09$ Watts
$E_3 = 6.49$ Volts
$I_3 = 3.25$ Amps
$R_3 = 2$ Ohms
$P_4 = 7.01$ Watts
$E_4 = 6.49$ Volts
$I_4 = 1.08$ Amps
$R_4 = 6$ Ohms
$P_5 = 60.67$ Watts
$E_5 = 5.51$ Volts
$I_5 = 11.01$ Amps
$R_5 = .5$ Ohms
$I_2 = I_T - I_1 - I_3 - I_4$
$I_2 = 11.01 - .13 - 3.25 - 1.08 = 6.55$ Amps


12 V
$P_T = 132.12$ Watts
$E_T = 12$ Volts
$I_T = 11.01$ Amps
$R_T = 1.09$ Ohms
$P_1 = .84$ Watts
$E_1 = 6.49$ Volts
$I_1 = .13$ Amps
$R_1 = 50$ Ohms
$P_2 = 42.51$ Watts
$E_2 = 6.49$ Volts
$I_2 = 6.55$ Amps
$R_2 = .99$ Ohms
$P_3 = 21.09$ Watts
$E_3 = 6.49$ Volts
$I_3 = 3.25$ Amps
$R_3 = 2$ Ohms
$P_4 = 7.01$ Watts
$E_4 = 6.49$ Volts
$I_4 = 1.08$ Amps
$R_4 = 6$ Ohms
$P_5 = 60.67$ Watts
$E_5 = 5.51$ Volts
$I_5 = 11.01$ Amps
$R_5 = .5$ Ohms