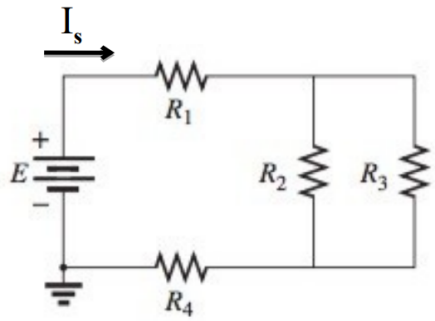
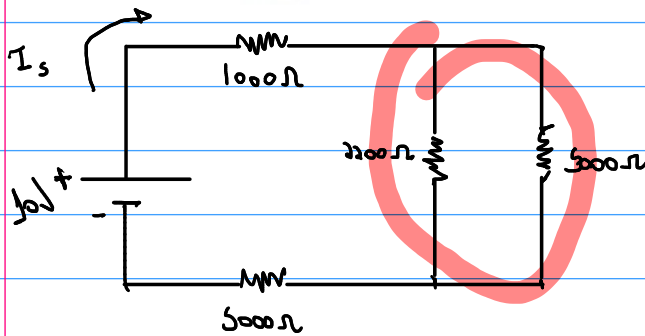


- **Exercício 1:** Supondo $E=10V$, $R_1=1k\Omega$, $R_2=2,2 k\Omega$, $R_3=R_4=5k\Omega$, determine R_T e I_s .

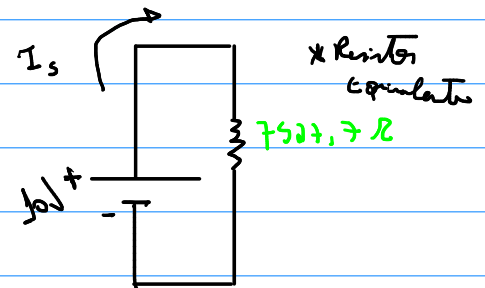
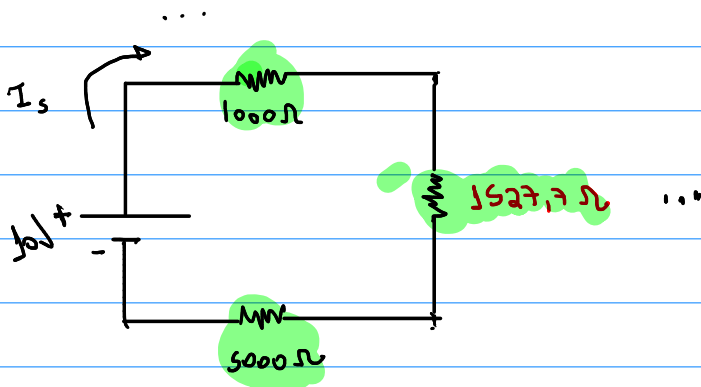


$$R_T = R_1 + R_2 + R_3 + R_4 + \dots + R_N$$

$$R_T = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \dots + \frac{1}{R_N}}$$

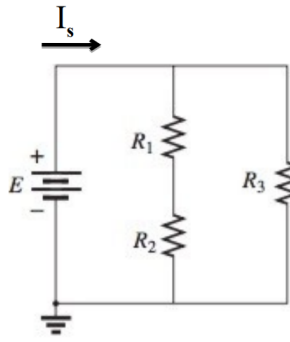


$$R_{eq} = \frac{1}{\frac{1}{2200} + \frac{1}{5000}} = 1527,7\Omega$$



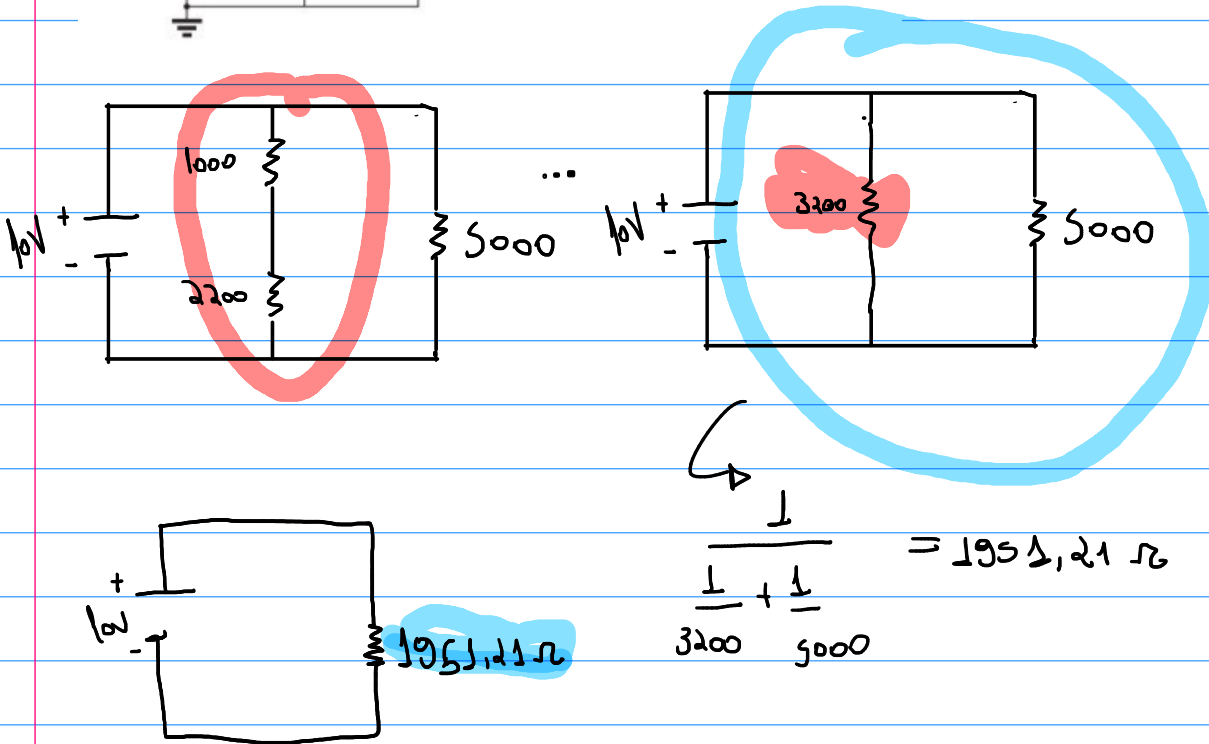
$$I_s = \frac{E}{R_{eq}} = \frac{10}{7527,7} = 0,00132843 A$$

- **Exercício 2:** Supondo $E=10V$, $R_1=1k\Omega$, $R_2=2,2 k\Omega$, $R_3=5k\Omega$, encontre R_T e I_s .



$$R_T = R_1 + R_2 + R_3 + R_4 + \dots + R_N$$

$$R_T = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \dots + \frac{1}{R_N}}$$

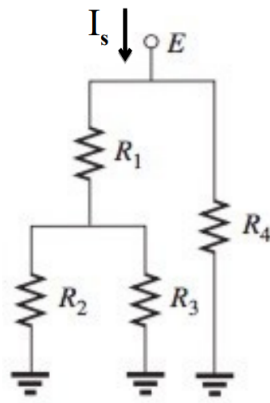


$$\frac{1}{\frac{1}{3200} + \frac{1}{5000}} = 1951,21 \Omega$$

$$R_t = 1951,21 \Omega$$

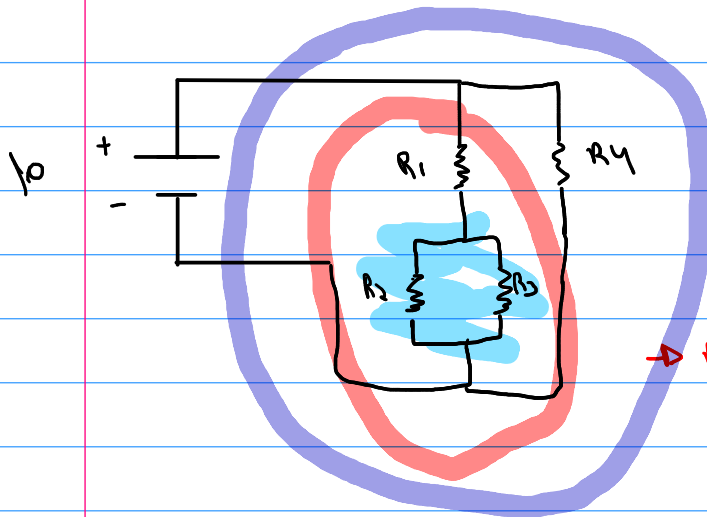
$$I_s = \frac{E}{R_t} = \frac{10}{1951,21} = 0,00512 A \text{ ou } 5,12 mA$$

- Exercício 3:** Supondo $E=10V$, $R_1=1k\Omega$, $R_2=2,2 k\Omega$, $R_3=R_4=5k\Omega$, encontre R_T e I_s .



$$R_T = R_1 + R_2 + R_3 + R_4 + \dots + R_N$$

$$R_T = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \dots + \frac{1}{R_N}}$$



$$R_{eq} = \frac{1}{\frac{1}{R_2} + \frac{1}{R_3}} = \frac{1}{\frac{1}{2200} + \frac{1}{5000}} = 1527,7 \Omega$$

$$\rightarrow R_{eq} = R_1 + 1527,7 = 2527,7 \Omega$$

$$\rightarrow R_T = \frac{1}{\frac{1}{2527,7} + \frac{1}{5000}} = 1678,93 \Omega$$

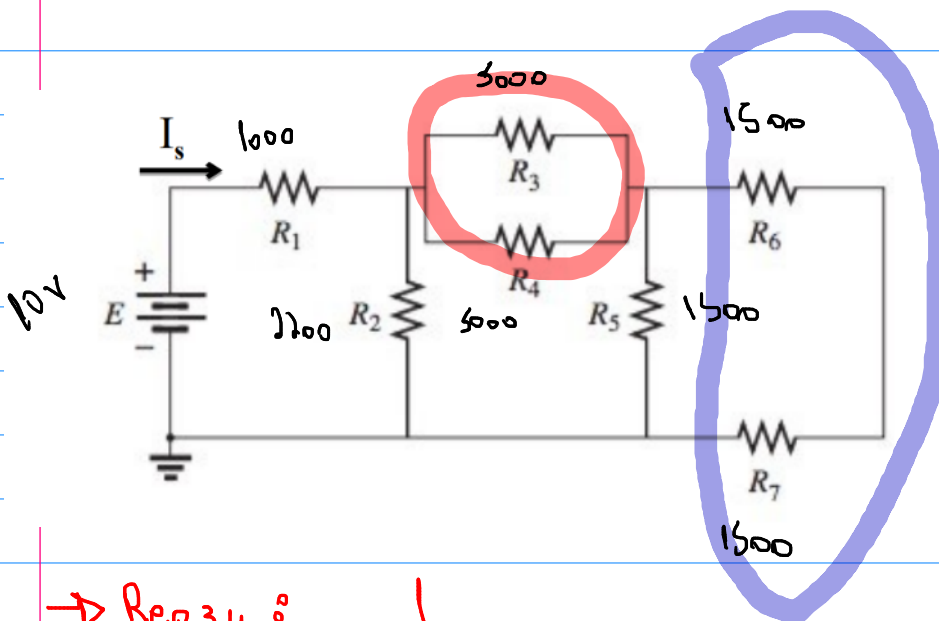
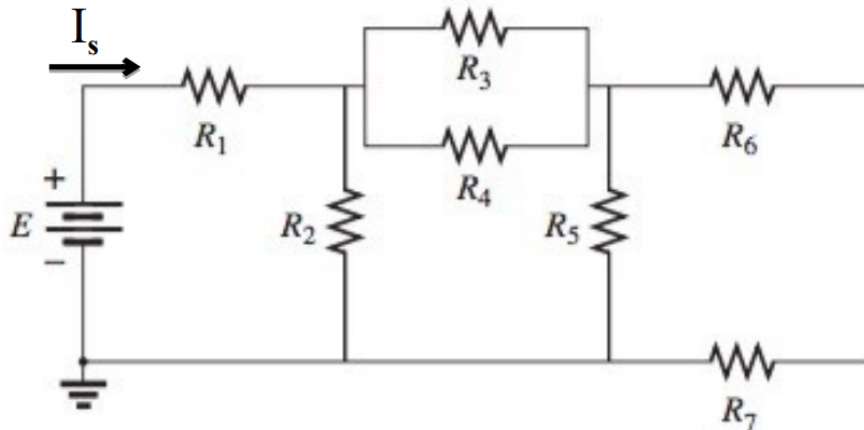
$$R_T = 1678,93 \Omega$$

$$I_s = \frac{E}{R_T} = \frac{10}{1678,93} = 0,005956A \text{ ou } 5,956 mA$$

Exercício 4: Supondo $E=10V$, $R_1=1k\Omega$, $R_2=2,2 k\Omega$, $R_3=R_4=5k\Omega$, $R_5=R_6=R_7=1,5 k\Omega$, encontre R_T e I_s :

$$R_T = R_1 + R_2 + R_3 + R_4 + \dots + R_N$$

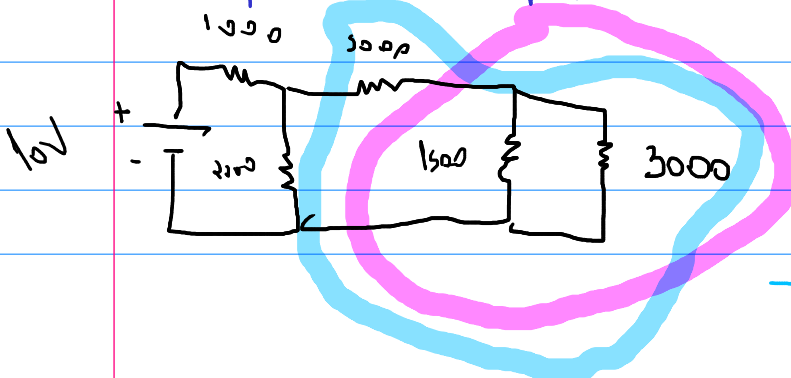
$$R_T = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \dots + \frac{1}{R_N}}$$



→ $R_{eq\,3,4} :$

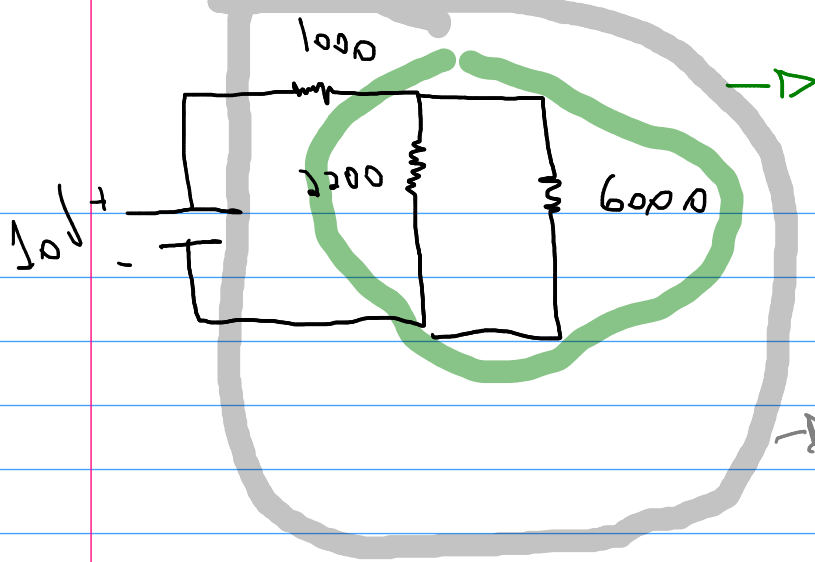
$$\frac{1}{\frac{1}{5000} + \frac{1}{5000}} = 2500 \, \Omega$$

→ $R_{eq\,6,7} : R_6 + R_7 = 3000$



→ $\frac{1}{\frac{1}{1500} + \frac{1}{3000}} = 1000$

→ $1000 + 5000 = 6000 \, \Omega$



$$\frac{1}{\frac{1}{2200} + \frac{1}{6000}} = 1609,75$$

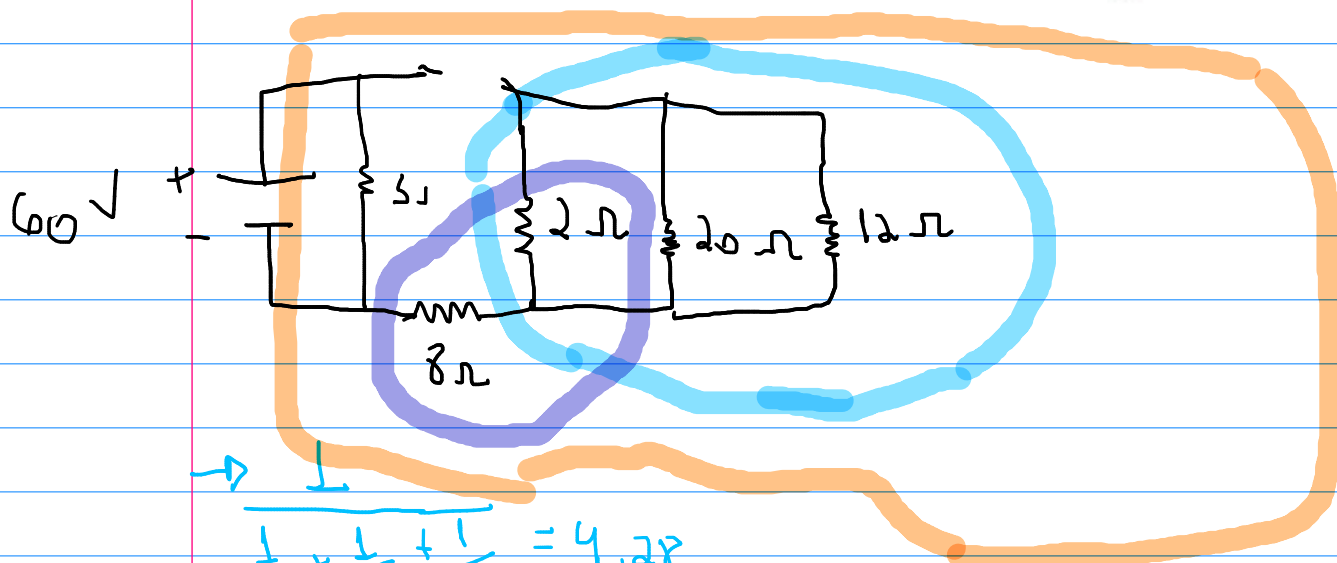
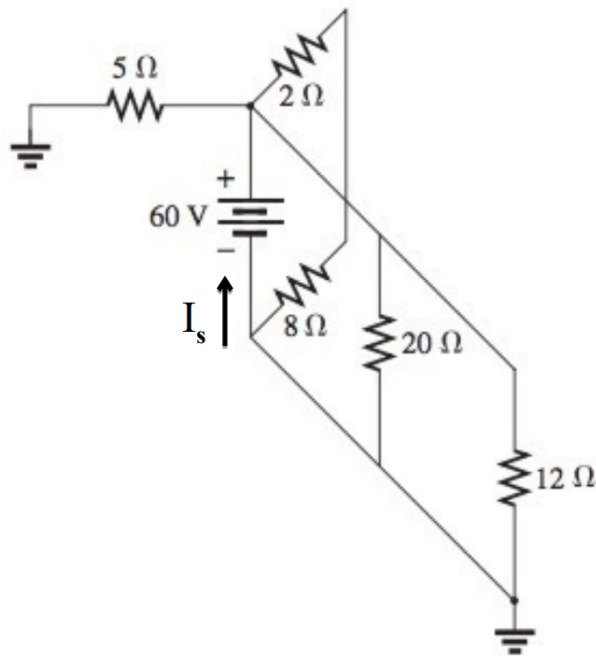
$$\rightarrow 1609,75 + 1000 = 1709,75 \Omega$$

$$R_t = 1709,75 \Omega$$

$$I_s = \frac{E}{R_t} = \frac{10}{1709,75} = 0,005848 \text{ A or } 5,848 \text{ mA}$$

• **Exercício 5:**

Para o circuito
determine
a resistência
equivalente e I_s :



$$\rightarrow \frac{1}{\frac{1}{10} + \frac{1}{20} + \frac{1}{12}} = 4,28$$

$$\rightarrow 8 + 2 = 10 \Omega$$

$$\rightarrow \frac{1}{\frac{1}{5} + \frac{1}{4,28}} = 2,30 \Omega$$

$$R_T = 2,30 \Omega$$

$$I_s = \frac{E}{R_T} = \frac{60}{2,30} = 26,08 A$$