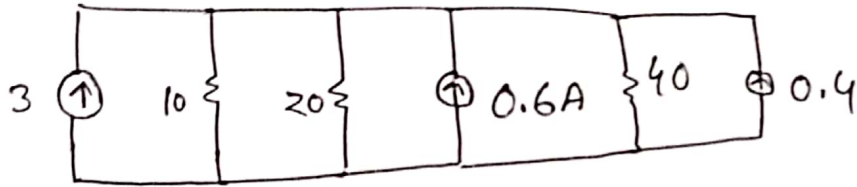


2. solve



Source we get

$$I_2 = \frac{12}{20} = 0.6A$$

$$I_3 = \frac{16}{40} = 0.4A$$

$$\begin{aligned} \therefore \text{total current } I &= I_1 + I_2 + I_3 \\ &= 3 + 0.6 + 0.4 \\ &= 4A \end{aligned}$$

\therefore equivalent resistance

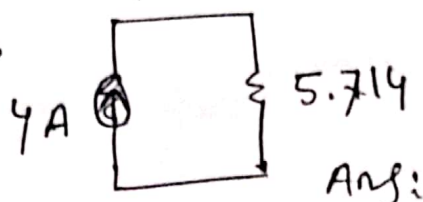
$$\frac{1}{R_{eq}} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

$$= \frac{1}{10} + \frac{1}{20} + \frac{1}{40}$$

$$= \frac{7}{40}$$

$$\Rightarrow R_{eq} = \frac{40}{7} = 5.714$$

\therefore after transforming all the source the new circuit is



Ans: