

by transforming to voltage source to current source we get,

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

And by transforming voltage source 3 to current source we get  $I_3 = \frac{16}{40} = 0.4 \text{ A}$

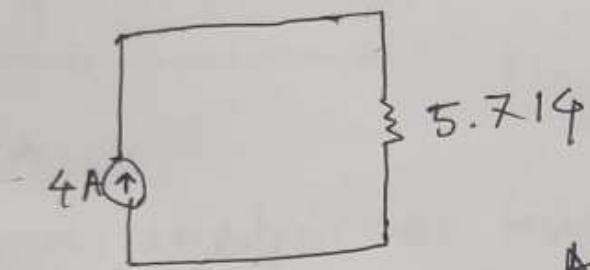
$$\begin{aligned} \text{total current } \Rightarrow I &= I_1 + I_2 + I_3 \\ &= 3 + 0.6 + 0.4 \\ &= 4 \text{ A} \end{aligned}$$

$\therefore$  equivalent resistance  $\rightarrow$

$$\begin{aligned} \frac{1}{R_{eq}} &= \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} \\ &= \frac{1}{10} + \frac{1}{20} + \frac{1}{40} \\ &= \frac{7}{40} \end{aligned}$$

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

∴ After transforming all the source  
the new circuit is



Ans:

$$2 \times 10^{-1} = 0.2$$

