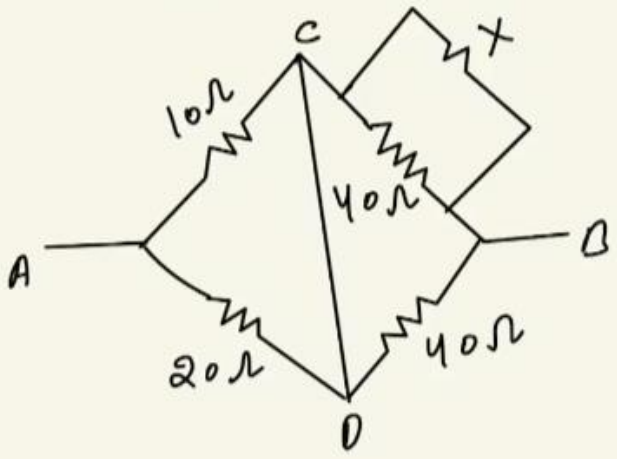
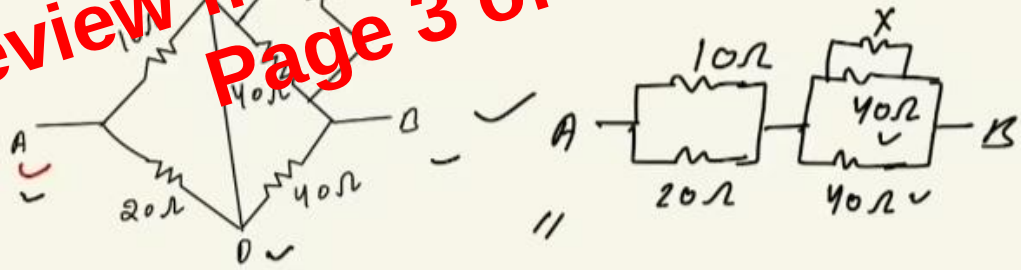
Q-2; and its solutions:

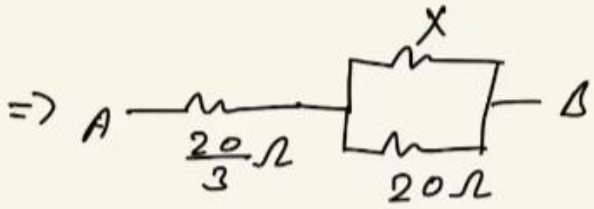


In the given circuit,for what value of X the Equivalent Resistance between A and B is 20 ohms

Solution ⇒

$V_C = V_D$





$R_{AB} = \frac{20}{3} + \frac{20X}{20+X}$

$20 = \frac{20}{3} + \frac{20X}{20+X}$

$\frac{20X}{20+X} = 20 - \frac{20}{3} = \frac{40}{3}$

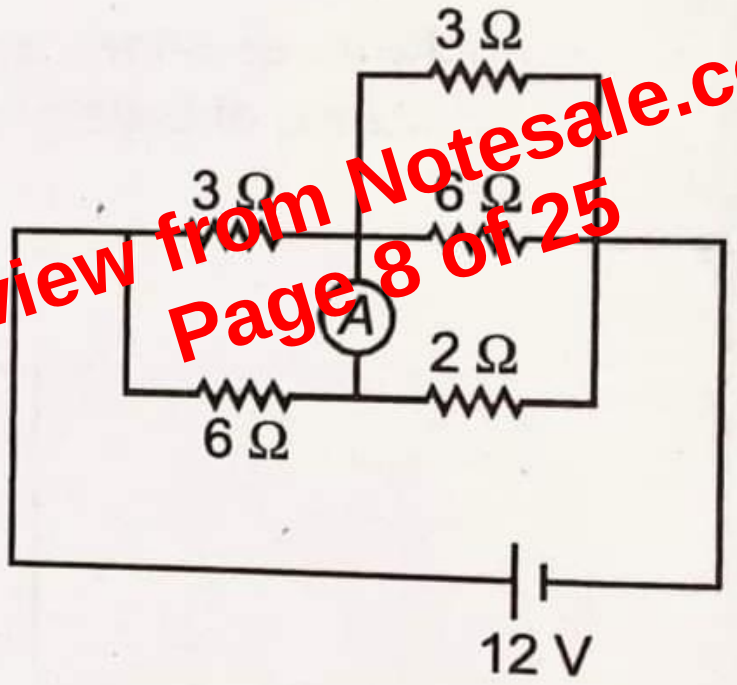
$3(20X) = 40(20+X)$

$60X = 800 + 40X$

$X = \frac{800}{20} = 40\Omega$

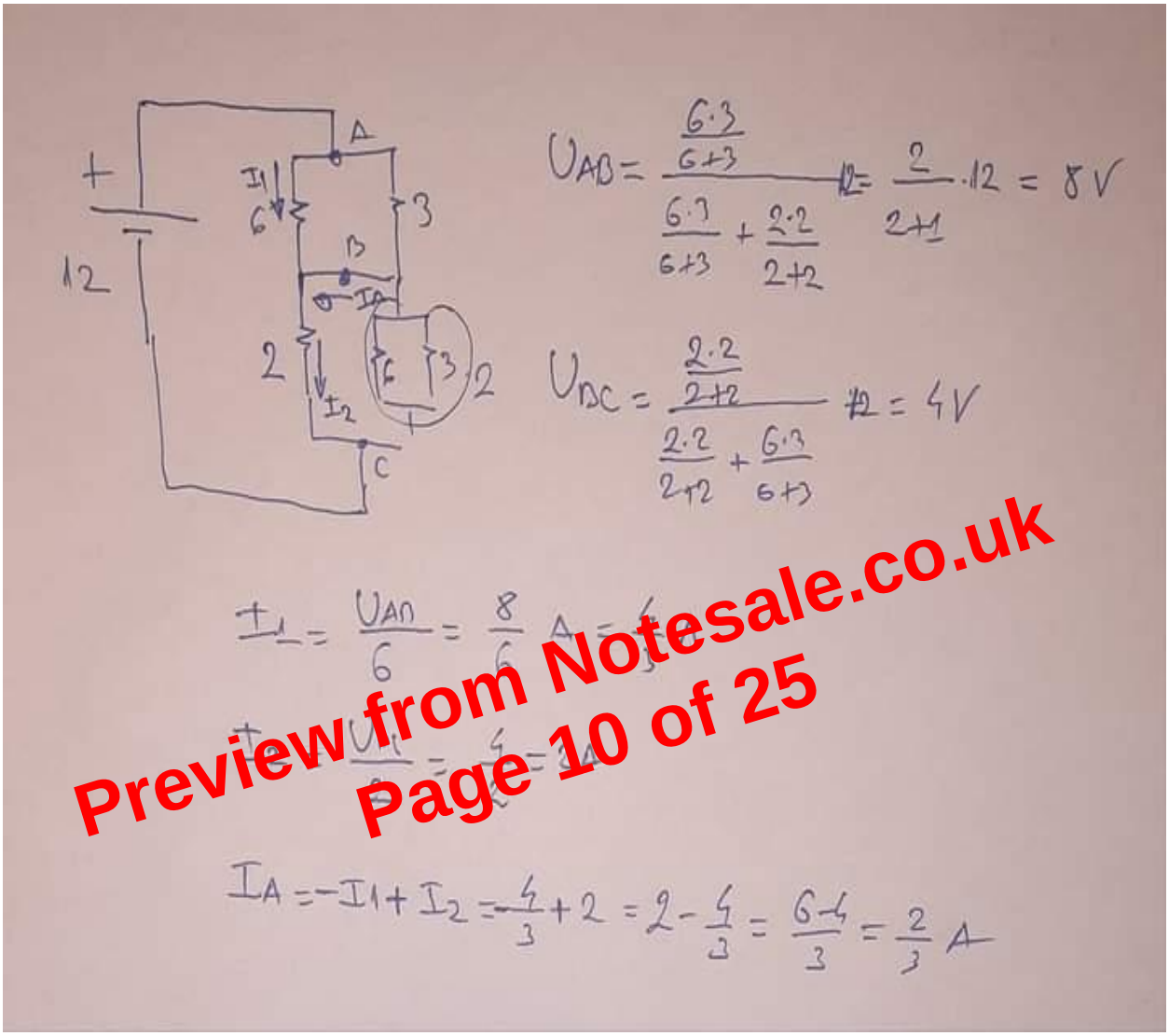
Q.5

In the circuit diagram shown below, what is the reading of ideal Ammeter (*A*)?

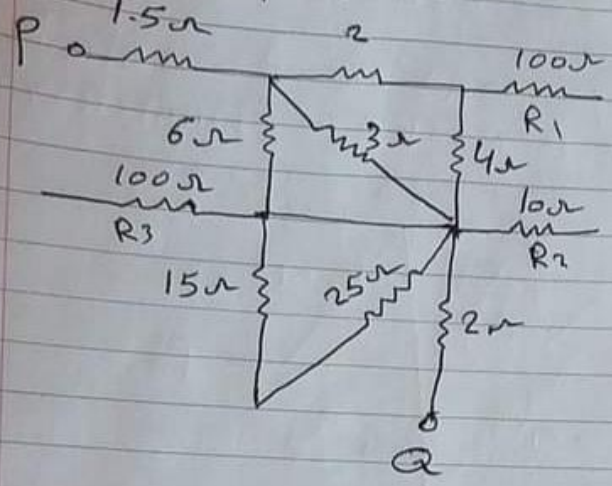


Q.5 Solution#1

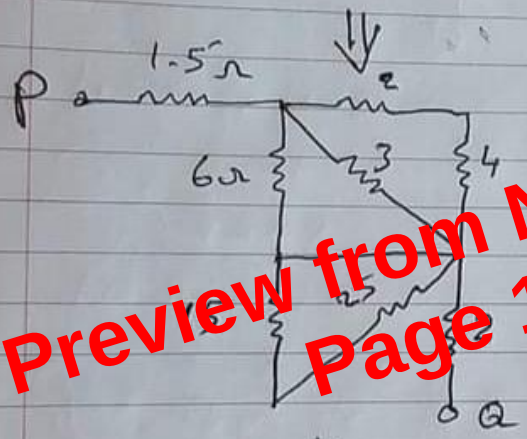
Q.5 solution#2



Find R_{PQ}



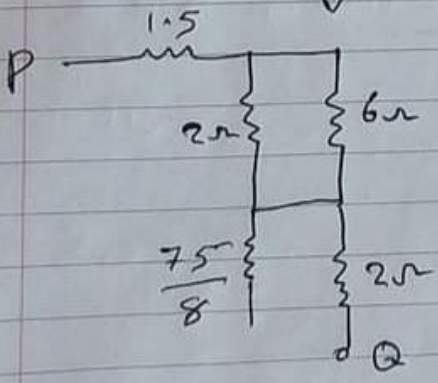
R_1, R_2, and R_3 are Out of the Circuit



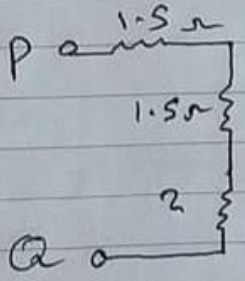
$4\Omega // 25\Omega$

$6\Omega // 3\Omega$

2Ω and 4Ω in Series



Resistance $\frac{75}{8}$ out of the circuit



$R_{PQ} = 1.5 + 1.5 + 2 \Rightarrow R_{PQ} = 5\Omega$