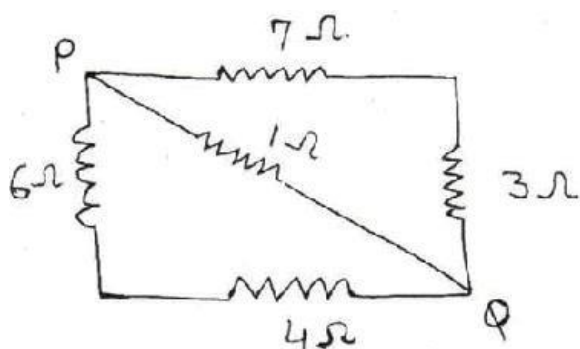**Answer on Question #42252-Physics-Electric Circuits**

Calculate effective resistance between P and Q in this IMAGE:

Solution

$$R_1 = 1\Omega, R_2 = 7\Omega, R_3 = 3\Omega, R_4 = 6\Omega, R_5 = 4\Omega.$$

Resistors R_2 and R_3 are connected in series, so

$$R_{23} = R_2 + R_3 = 7\Omega + 3\Omega = 10\Omega.$$

Resistors R_4 and R_5 are connected in series, so

$$R_{45} = R_4 + R_5 = 6\Omega + 4\Omega = 10\Omega.$$

We have the parallel connection of R_1, R_{23} and R_{45}, thus

$$\frac{1}{R_{PQ}} = \frac{1}{R_1} + \frac{1}{R_{23}} + \frac{1}{R_{45}} = \frac{1}{1\Omega} + \frac{1}{10\Omega} + \frac{1}{10\Omega} = \frac{12}{10\Omega} \rightarrow R_{PQ} = \frac{10\Omega}{12} = \frac{5}{6}\Omega \approx 0.83\Omega.$$

Answer: $\frac{5}{6}\Omega \approx 0.83\Omega$.