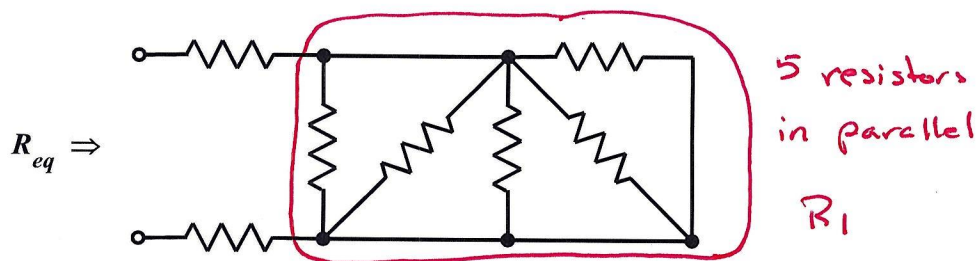


EE 2240

Homework Problem #006



Each resistor is 25Ω . Determine the value of R_{eq} .

$$\begin{aligned}\frac{1}{R_1} &= \frac{1}{25\Omega} + \frac{1}{25\Omega} + \frac{1}{25\Omega} + \frac{1}{25\Omega} + \frac{1}{25\Omega} \\ &= \frac{5}{25\Omega} = \frac{1}{5\Omega}\end{aligned}$$

$$\therefore R_1 = 5\Omega$$

$$\begin{aligned}R_{eq} &= 25\Omega + R_1 + 25\Omega \\ &= 50\Omega + 5\Omega \\ &= 55\Omega\end{aligned}$$