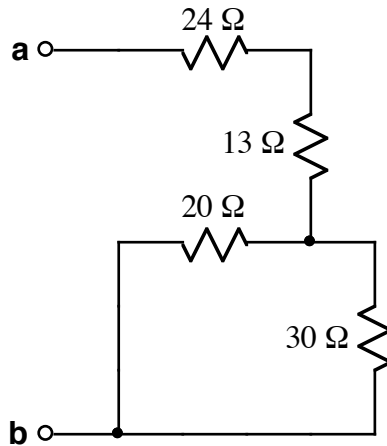


Ex:



Find the value of total resistance between terminals **a** and **b**.

SOL'N: a) The 20 Ω and 30 Ω resistors are in parallel:

$$20\Omega \parallel 30\Omega = 10\Omega \cdot 2 \parallel 3 = 10\Omega \cdot \frac{2 \cdot 3}{2 + 3} = 10\Omega \cdot \frac{6}{5} = 12\Omega$$

We replace the 20 Ω and 30 Ω resistors with a single 12 Ω resistor, leaving three resistors in series, whose values sum:

$$R_{ab} = 24\Omega + 13\Omega + 12\Omega = 49\Omega$$