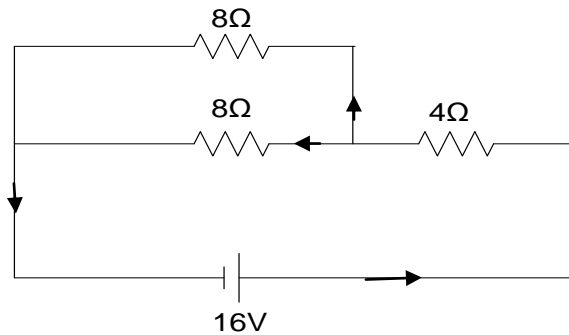


Q- In the circuit below

a) Find the current in the 4Ω resistor.



The two 8Ω resistors are in parallel and hence their equivalent resistance will be

$$\frac{8 \times 8}{8 + 8} = 4\Omega$$

Now the circuit reduces to the two 4Ω resistors in series and hence equivalent resistance in the circuit is 8Ω .

Hence the current in the circuit will be

$$I = E/R = 16/8 = 2 \text{ A}$$

And hence the current in the 4Ω resistance will also be **2A**.

b) What is the power dissipated in this resistor?

Power dissipated in this 4Ω resistor will be

$$P = I^2 R = 4 \times 4 = 16 \text{ W}$$