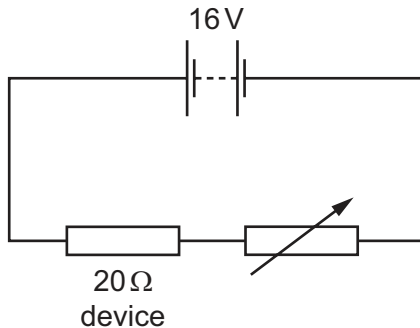


- 34** An electrical device of fixed resistance $20\ \Omega$ is connected in series with a variable resistor and a battery of electromotive force (e.m.f.) $16\ \text{V}$ and negligible internal resistance.



What is the resistance of the variable resistor when the power dissipated in the electrical device is $4.0\ \text{W}$?

- A** $16\ \Omega$ **B** $36\ \Omega$ **C** $44\ \Omega$ **D** $60\ \Omega$

- 35** A wire of length l has resistance R . The cross section of the wire is circular with radius r .