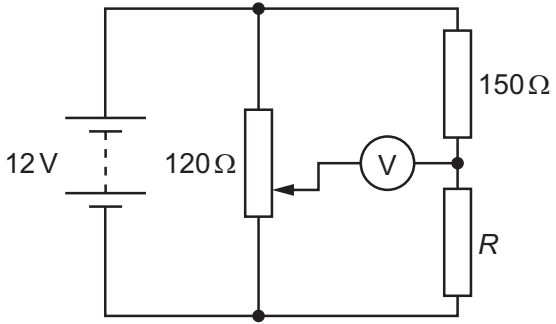
38 In the circuit shown, a potentiometer of total resistance 120 Ω is connected in parallel with a resistor of resistance 150 Ω and a resistor of resistance *R*.

The battery has electromotive force (e.m.f.) 12 V and negligible internal resistance.



The voltmeter reads 0 V when the slider of the potentiometer is $\frac{1}{4}$ of the way from its lower end, as shown.

What is resistance *R*?

A 30 Ω **B** 38 Ω **C** 50 Ω **D** 450 Ω