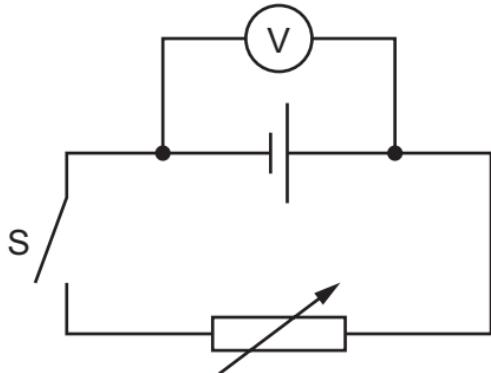


- 36 A cell that has internal resistance is connected to a switch S and a variable resistor. A voltmeter is connected between the terminals of the cell, as shown.



When switch S is open, the voltmeter reads 1.5V. The switch is then closed and the variable resistor is adjusted to have a resistance of 4.0Ω . The voltmeter now reads 0.75V.

What is the internal resistance of the cell?

A 1.0Ω

B 2.0Ω

C 4.0Ω

D 8.0Ω