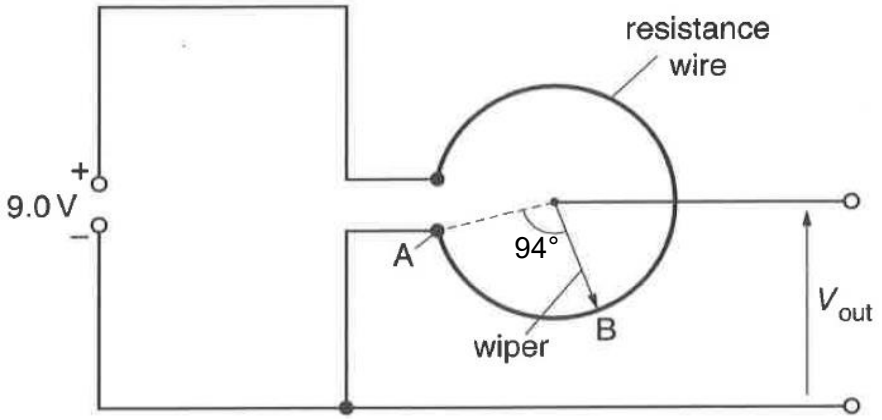
23 A rotary potentiometer consists of a length of uniform resistance wire connected to the terminals of the power supply.



A wiper (variable terminal) can rotate and make contact with any part of the resistance wire.

The connection wires to the power supply and the wire have zero resistance.

The power supply has e.m.f. 9.0 V and zero internal resistance.

The resistance wire has length 5.9 cm and is arranged in part of a circle of radius 1.0 cm.

The wiper is rotated to point B through an angle of 94° from point A.

What is the output voltage V_{out} when the wiper is at point B?

A 2.35 V **B** 2.50 V **C** 2.67 V **D** 2.78 V