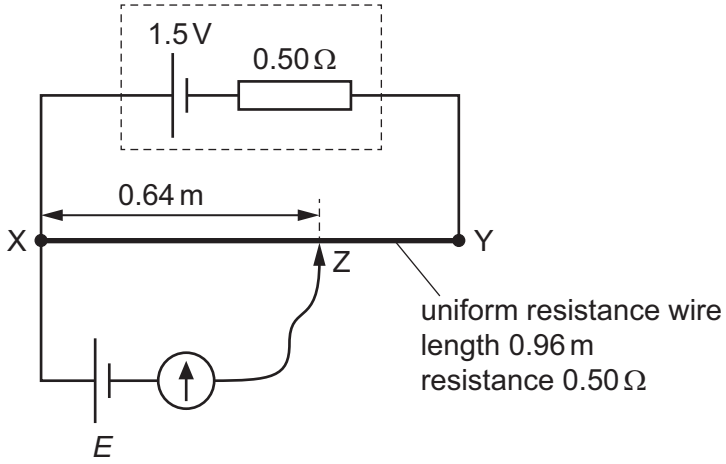
37 A potentiometer circuit is used to determine the electromotive force (e.m.f.) *E* of a cell. The circuit includes a second cell of e.m.f. 1.5 V and internal resistance 0.50 Ω that is connected to a uniform resistance wire XY, as shown.



The resistance wire XY has a length of 0.96 m and a resistance of 0.50 Ω.

The movable connection Z is moved along wire XY. The galvanometer reading is zero when length XZ is 0.64 m.

What is the value of e.m.f. *E*?

A 0.50 V **B** 0.75 V **C** 1.0 V **D** 1.1 V