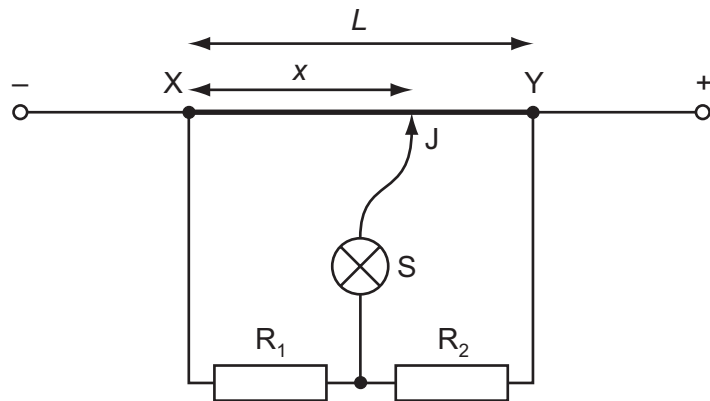**37** In the circuit shown, XY is a length L of uniform resistance wire. R_1 and R_2 are unknown resistors. J is a sliding contact that joins the junction of R_1 and R_2 to points on XY through a small signal lamp S.

To determine the ratio $\dfrac{V_1}{V_2}$ of the potential differences across R_1 and R_2, a point is found on XY at which the lamp is off. This point is at a distance x from X.

What is the value of the ratio $\dfrac{V_1}{V_2}$?

A $\dfrac{L}{x}$ **B** $\dfrac{x}{L}$ **C** $\dfrac{L-x}{x}$ **D** $\dfrac{x}{L-x}$