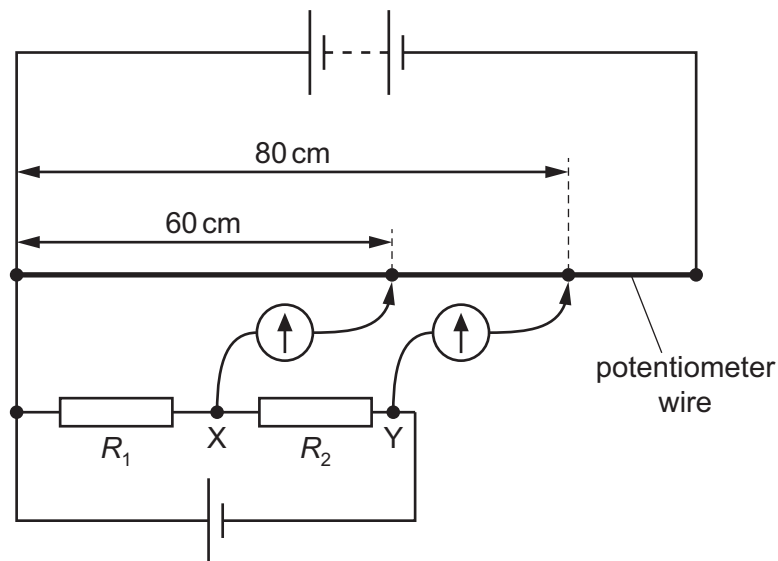**38** Potential differences across two resistors of resistances R_1 and R_2 are compared using a potentiometer wire (uniform resistance wire) in the electrical circuit shown.

One terminal of a galvanometer is connected to point X. The galvanometer reads zero when its other terminal is connected to a point that is a distance of 60 cm from one end of the potentiometer wire.

One terminal of a second galvanometer is connected to point Y. This galvanometer reads zero when its other terminal is connected to a point that is a distance of 80 cm from the same end of the potentiometer wire.

What is the ratio $\dfrac{R_2}{R_1}$?

A $\dfrac{1}{3}$ **B** $\dfrac{3}{4}$ **C** $\dfrac{3}{1}$ **D** $\dfrac{4}{3}$