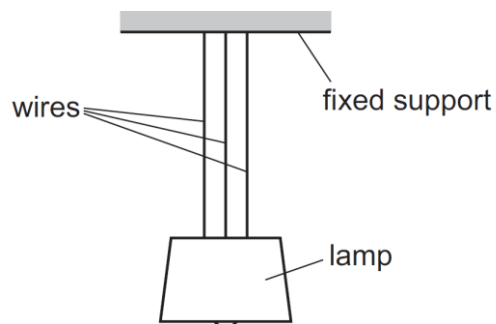3 A lamp is suspended in equilibrium from a fixed support by three long identical wires.

The weight of the lamp causes each wire to have an extension of 0.40 cm. The height h of the lamp above the floor is measured.

The middle wire suddenly breaks and the lamp falls a small distance as the extensions of the remaining two wires increase. The wires obey Hooke's law.

When the lamp is in equilibrium, the height h of the lamp above the floor is measured again.

What is the difference between the two values of h?

A   0.20 cm   B   0.27 cm   C   0.40 cm   D   0.60 cm