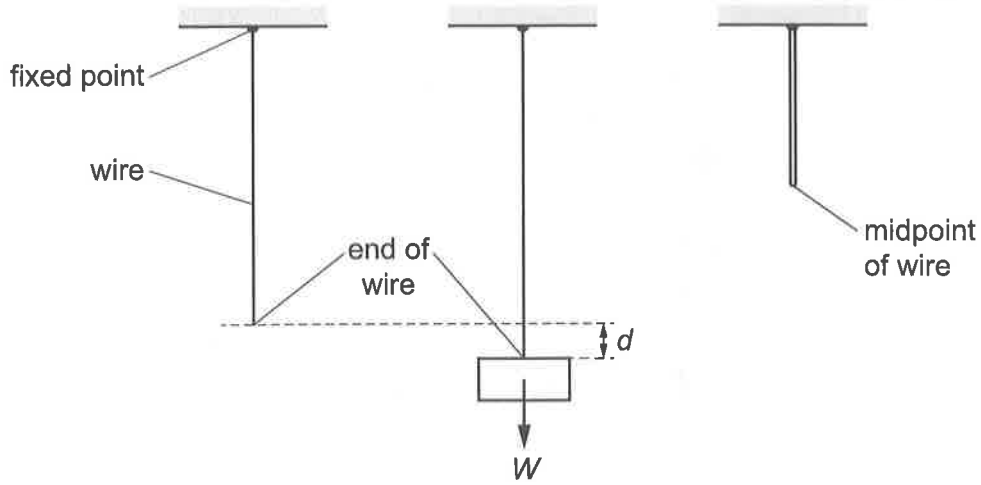
7 A length of wire hangs vertically from a fixed point, as shown in the first diagram.



An object of weight W is suspended from the end of the wire. The wire extends, and the object moves through vertical distance d, as shown in the second diagram. The wire obeys Hooke's law throughout.

The object is removed, and both ends of the wire are connected to the fixed point, as shown in the third diagram.

The object is now suspended from the midpoint of the wire.

Through which vertical distance does the object move?

A $\frac{d}{8}$ **B** $\frac{d}{4}$ **C** $\frac{d}{2}$ **D** d