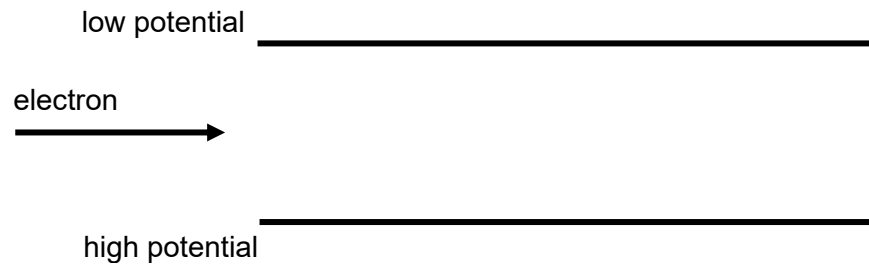


- 20** An electron is projected horizontally with a speed of $3.1 \times 10^7 \text{ m s}^{-1}$. It passes in between the two charged horizontal plates. The uniform electric field between the plates is 20000 N C^{-1} . As the electron passes through the plates, it is deflected. The time taken for the electron to travel the length of the plate is $4.0 \times 10^{-9} \text{ s}$.



What is the vertical distance travelled by the electron after it has travelled the length of the plate?

- A** $1.76 \times 10^{-17} \text{ m}$ **B** $7.85 \times 10^{-17} \text{ m}$ **C** 0.0281 m **D** 0.152 m