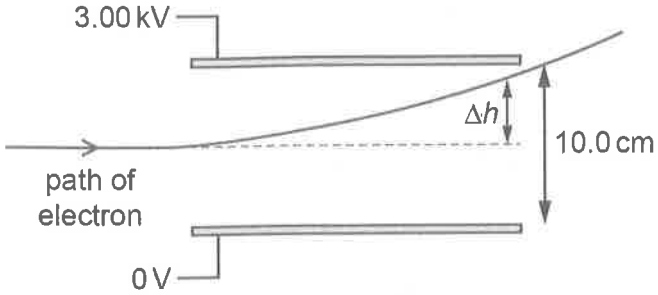
25 An electron, initially travelling horizontally at $1.97 \times 10^7\,\text{m s}^{-1}$, enters a uniform electric field at right angles to the field. The electric field is generated by applying a potential difference of 3.00 kV between two parallel conducting plates 10.0 cm apart.



What is the change in height Δh of the electron during the first 5.00 cm of horizontal distance travelled into the field?

A $1.36 \times 10^{-4}\,\text{m}$

B $1.70 \times 10^{-2}\,\text{m}$

C $3.34 \times 10^{-2}\,\text{m}$

D $1.36 \times 10^{-1}\,\text{m}$