

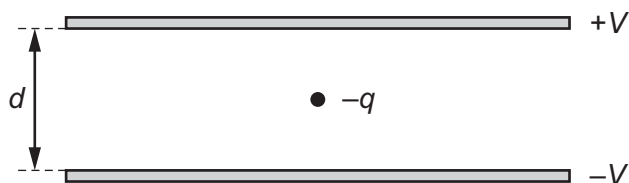
- 30 In a double-slit experiment the distance between the fringes, on a screen, was too small to measure.

What would increase the distance between the fringes?

- A increasing the distance between the light source and the slits
 - B increasing the distance between the slits and the screen
 - C increasing the distance between the slits
 - D increasing the frequency of the light source
- 31 Two parallel metal plates, a distance of 2 mm apart, have a potential difference of 1000 V across them.

What is the electric field strength between the plates?

- A 500 V m^{-1} B $50\,000 \text{ V m}^{-1}$ C $50\,000 \text{ NC}^{-1}$ D $500\,000 \text{ NC}^{-1}$
- 32 An oil droplet has charge $-q$ and is situated between two horizontal metal plates as shown in the diagram.



The separation of the plates is d . The droplet is observed to be stationary when the upper plate is at potential $+V$ and the lower plate is at potential $-V$.

For this to occur, what is the weight of the droplet?

- A $\frac{Vq}{d}$ B $\frac{2Vq}{d}$ C $\frac{Vd}{q}$ D $\frac{2Vd}{q}$