

- 36 Evidence for wave-particle duality may be observed by the diffraction of an electron beam at a slit. A diffraction pattern is observed on a suitable screen.

For an electron passing through the slit, the uncertainty in its position Δx and the uncertainty in its momentum Δp are related by the following expression.

$$\Delta x \Delta p \approx \frac{h}{2\pi}$$

Which diagram shows the positions where Δx and Δp in the equation above are defined and shows them in the correct direction?

