

- 16** The centripetal force on an electron as it orbits a proton is $2.3 \times 10^{-8} \text{ N}$.

The electron is $1.1 \times 10^{-10} \text{ m}$ from the proton.

What is the linear speed of the electron?

A $3.9 \times 10^4 \text{ m s}^{-1}$

B $1.7 \times 10^6 \text{ m s}^{-1}$

C $1.2 \times 10^8 \text{ m s}^{-1}$

D $2.8 \times 10^{12} \text{ m s}^{-1}$

- 17** A wire of resistance R has a length l and a circular cross-section of radius r .