

**28** A proton has a kinetic energy of 1.00 MeV.

If its momentum is measured with an uncertainty of 1.00%, what is the minimum uncertainty in its position?

**A**  $5.64 \times 10^{-14} \text{ m}$

**B**  $9.08 \times 10^{-14} \text{ m}$

**C**  $2.87 \times 10^{-12} \text{ m}$

**D**  $9.77 \times 10^{-10} \text{ m}$

**29** In order to detect a leak in a water pipe buried 0.4 m below a soccer field, which of the