

- 28** An electron and a baseball have kinetic energies of 1.0 MeV and 100 J respectively. The percentage uncertainty in the measurement of their momenta is 1.0%.

What is the approximate ratio of the minimum uncertainty in the position of the electron to that of the baseball?

**A**  $10^7$

**B**  $10^{14}$

**C**  $10^{22}$

**D**  $10^{44}$