

**39** The isotope  $^{222}_{86}\text{Rn}$  decays in a sequence of emissions to form the isotope  $^{206}_{82}\text{Pb}$ . At each stage of the decay sequence, it emits either an  $\alpha$ -particle or a  $\beta$ -particle.

What is the number of stages in the decay sequence?

**A** 4

**B** 8

**C** 16

**D** 20

**10** What is the approximate mass of a nucleus of uranium?