

**39** Which statement about nuclei is correct?

- A** Different isotopic nuclei have different proton numbers.
- B** For some nuclei, the nucleon number can be less than the proton number.
- C** In some nuclear processes, mass-energy is not conserved.
- D** Nucleon numbers of nuclei are unchanged by the emission of  $\beta$ -particles.

**40** The diagram shows part of a radioactive decay chain in which the nuclide thorium-232 decays by