

- 30** The uranium nuclide  $^{238}_{92}\text{U}$  undergoes a series of  $\alpha$  and  $\beta$  decays to the stable lead nuclide  $^{206}_{82}\text{Pb}$ .

What is the number of  $\alpha$  decays and  $\beta$  decays in the series of decays?

**A** 5  $\alpha$  decays and 12  $\beta$  decays

**B** 6  $\alpha$  decays and 8  $\beta$  decays

**C** 7  $\alpha$  decays and 4  $\beta$  decays

**D** 8  $\alpha$  decays and 6  $\beta$  decays