

37 A nucleus of uranium-238, $^{238}_{92}\text{U}$, decays in a series of steps to form a nucleus of lead-206, $^{206}_{82}\text{Pb}$, as shown.



An α -particle or a β^- particle is emitted during each step.

What is the total number of β^- particles that are emitted?

A 6

B 8

C 10

D 16