

- 40** A nucleus of  $^{238}_{92}\text{U}$  decays in stages by emitting  $\alpha$ -particles and  $\beta^-$  particles, eventually forming a nucleus of  $^{206}_{82}\text{Pb}$ .

How many  $\alpha$ -particles and how many  $\beta^-$  particles are emitted during the decay chain?

	$\alpha$ -particles	$\beta^-$ particles
<b>A</b>	8	6
<b>B</b>	8	10
<b>C</b>	16	6
<b>D</b>	16	22