

- 29 A neutron collides with a  ${}^{235}_{92}\text{U}$  nucleus. The fission reaction that occurs splits the nucleus into  ${}^{141}_{56}\text{Ba}$ ,  ${}^{92}_{36}\text{Kr}$  and three neutrons, and energy is released.

The equation for this reaction is shown.



The table shows the masses of the particles in the reaction.

nucleus	mass / u
${}^{235}_{92}\text{U}$	235.04
${}^{141}_{56}\text{Ba}$	140.91
${}^{92}_{36}\text{Kr}$	91.91
${}_0^1\text{n}$	1.01

What is the energy released in this fission reaction?

- A  $3.0 \times 10^{-11} \text{ J}$
- B  $1.8 \times 10^{-10} \text{ J}$
- C  $1.8 \times 10^{16} \text{ J}$
- D  $1.1 \times 10^{17} \text{ J}$