

- 29** The rest mass of the deuteron, ${}^2_1\text{H}$, is equivalent to an energy of 1876 MeV. The rest masses of a proton and a neutron are equivalent to 939 MeV and 940 MeV respectively.

Which of the following occurs when a deuteron disintegrates into a proton and neutron?

- A** The deuteron emits a γ -ray photon of energy 2 MeV.
- B** The deuteron captures a γ -ray photon of energy 2 MeV.
- C** The deuteron emits a γ -ray photon of energy 3 MeV.
- D** The deuteron captures a γ -ray photon of energy 3 MeV.