38 A radioactive sample decays by emitting β^- particles.

The energy released in the decay process is the same for each nucleus that decays, but the β^- particles emitted have a continuous range of kinetic energies.

Which statement explains why the β^- particles are emitted with a continuous range of kinetic energies?

A Some of the energy released is given to the remaining nucleons in the nucleus.

B Some of the energy released is taken by an emitted antineutrino.

C Some of the energy released is used to create the β^- particle.

D Some of the energy released is used to create a new nucleon.