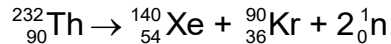


**30** Thorium-232 undergoes the following fission reaction:



The binding energy per nucleon for the nuclei involved are:

Thorium-232: 7.6 MeV

Xenon-140: 8.3 MeV

Krypton-90: 8.5 MeV

What is the energy released by this fission reaction?

**A**  $1.64 \times 10^8 \text{ J}$

**B**  $2.63 \times 10^{-11} \text{ J}$

**C**  $1.47 \times 10^{-12} \text{ J}$

**D**  $2.63 \times 10^{-17} \text{ J}$

**END OF PAPER**