Next-Time Question

When a neutron interacts with a U-235 nucleus, it can fission many possible ways. What element results if it fissions into two identical nuclei?

Can you answer this one? How many neutrons are produced when a U-235 nucleus fissions into Sr-90 and Xe-138?
Answers: 8
If uranium fissions into 2 identical elements, their atomic number is half 92, or 46. That's palladium.

If U-235 fissions into strontium-90 and xenon-138, 8 neutrons are released, according to the reaction

\[ ^{235}_{92}U + ^1_0n \rightarrow ^{90}_{38}Sr + ^{138}_{54}Xe + 8(^1_0n). \]

(The number of neutrons released per fission reaction for most reactions is considerably less than 8.)