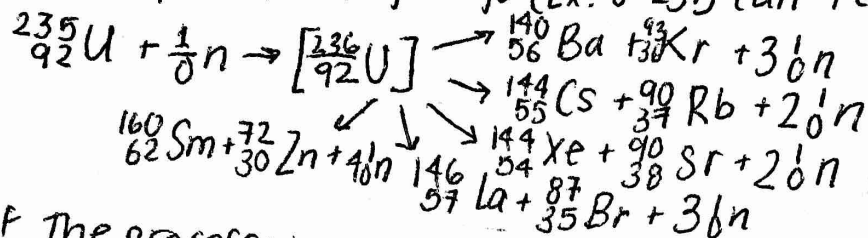


Nuclear Fission

- Some nuclides can break apart (undergo fission) when bombarded with neutrons
- Mass of reactants > mass of products
↳ missing mass is converted to energy
- Nucleus can split in many ways (Ex. U-235 can result in many rxns)



- Start of the process: bombardment of the radioactive nuclide with a neutron starts the process
- Neutrons released in the transmutation strike other nuclei, causing their decay and the production of more neutrons → chain reaction
- Critical mass: minimum mass that can sustain chain reaction ^{isotope}
- Nuclear weapons contain separate subcritical amounts of fissionable
→ amounts driven together to create critical mass upon detonation