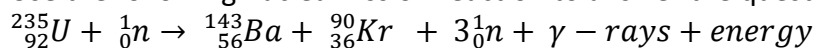


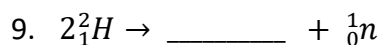
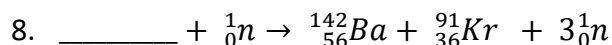
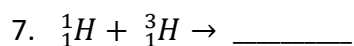
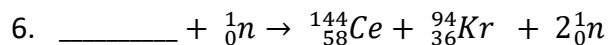
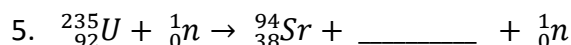
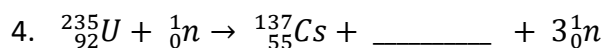
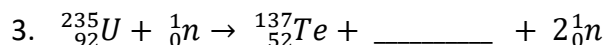
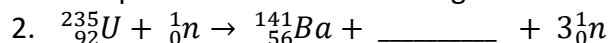
Nuclear Fission & Fusion Reactions Worksheet

1. Use the following nuclear fission reaction to answer the questions below.



- How many protons are there in the uranium nucleus?
- How many neutrons are there in the uranium nucleus?
- How many protons are there in the nuclei on the product (right) side of the equation?
- How many neutrons are there on each side of the equation?

Complete each of the following and determine whether each is nuclear fusion or fission.



$$10. {}^{13}_6C + {}^4_2He \rightarrow \text{_____} + {}^1_0n$$

$$11. {}^{14}_7N + {}^4_2He \rightarrow \text{_____} + {}^1_0n$$

$$12. {}^{238}_{92}U + {}^{14}_7N \rightarrow \text{_____} + 4 {}^1_0n$$

$$13. {}^{238}_{92}U + {}^{12}_6C \rightarrow \text{_____} + 4 {}^1_0n$$

$$14. {}^{252}_{98}Cf + \text{_____} \rightarrow {}^{257}_{103}Lw + 6 {}^1_0n$$

$$15. {}^{235}_{92}U + {}^1_0n \rightarrow {}^{141}_{56}Ba + \text{_____} + 3 {}^1_0n$$

$$16. {}^{235}_{92}U + {}^1_0n \rightarrow {}^{139}_{53}I + \text{_____} + 3 {}^1_0n$$

$$17. {}^{241}_{95}Am + {}^4_2He \rightarrow \text{_____} + 2 {}^1_0n$$

$$18. {}^{214}_{84}Po + 2 {}^4_2He + {}^1_0n \rightarrow \text{_____}$$