Name_____ Per _____

Nuclear decay

Fill in the blanks to complete the following nuclear reactions. Use a periodic table.

1. $^{42}_{19}K \rightarrow {}^{0}_{-1}e + $ _____

2. $^{239}_{\ }Pu \rightarrow {}^{4}_{2}He + $ _____

3. $^{235}_{92}U \rightarrow$ _____ $+ {}^{231}_{90}Th$

4. $^{1}_{1}H + {}^{3}_{1}H \rightarrow$ _____

5. $^{6}_{3}Li + {}^{1}_{0}n \rightarrow {}^{0}_{-1}e\ {}^{4}_{2}He +$ _____

6. $^{27}_{13}Al + {}^{4}_{2}He \rightarrow {}^{30}_{15}P +$ _____

7. $^{9}_{4}Be + {}^{1}_{1}H \rightarrow$ _____ $+ {}^{4}_{2}He$

8. $^{37}_{\ }K \rightarrow {}^{0}_{+1}e +$ _____

9. _____ $+ {}^{1}_{0}n \rightarrow {}^{142}_{56}Ba + {}^{91}_{36}Kr + 3\,{}^{1}_{0}n$

10. $^{238}_{92}U + {}^{4}_{2}He \rightarrow$ _____ $+ {}^{1}_{0}n$

11. $^{99}_{43}Tc \rightarrow$ _____ $+ {}^{0}_{-1}e$

12. $^{226}_{88}Ra \rightarrow {}^{4}_{2}He +$ _____

13. _____ $\rightarrow {}^{4}_{2}He + {}^{208}_{81}Tl$

14. $^{27}_{13}Al +$ _____ $\rightarrow {}^{24}_{11}Na + {}^{4}_{2}He$

15. $^{235}_{92}U + {}^{1}_{0}n \rightarrow 3\,{}^{1}_{0}n + {}^{139}_{56}Ba +$ _____

16. $^{235}_{92}U + {}^{1}_{0}n \rightarrow {}^{139}_{53}I + 2\,{}^{1}_{0}n +$ _____

17. $^{241}_{95}Am + {}^{4}_{2}He \rightarrow 2\,{}^{1}_{0}n +$ _____

18. $^{214}_{84}Po + 2\,{}^{4}_{2}He + 2\,{}^{0}_{-1}e \rightarrow$ _____