Nuclear Chemistry Worksheet

Complete the following nuclear equations:

1. $\_\_\_\_ \rightarrow {}^{0}_{-1}e + {}^{14}_{7}\mathrm{N}$
2. $\_\_\_\_ + {}^{4}_{2}\mathrm{He} \rightarrow {}^{12}_{6}\mathrm{C} + {}^{1}_{0}n$
3. ${}^{239}_{93}\mathrm{Np} \rightarrow {}^{239}_{94}\mathrm{Pu} + \_\_\_\_$
4. $\_\_\_\_ + {}^{238}_{92}\mathrm{U} \rightarrow {}^{240}_{94}\mathrm{Pu} + {}^{1}_{0}n + {}^{1}_{0}n$
5. ${}^{1}_{0}n + \_\_\_\_ \rightarrow {}^{236}_{92}\mathrm{U}$
6. ${}^{13}_{7}\mathrm{N} \rightarrow \_\_\_\_ + {}^{0}_{+1}e$
7. $\_\_\_\_ + {}^{1}_{1}\mathrm{H} \rightarrow {}^{12}_{6}\mathrm{C} + {}^{4}_{2}\mathrm{He}$
8. $\_\_\_\_ + {}^{1}_{0}n \rightarrow {}^{3}_{1}\mathrm{H} + {}^{4}_{2}\mathrm{He}$
9. ${}^{226}_{88}\mathrm{Ra} \rightarrow {}^{4}_{2}\mathrm{He} + \_\_\_\_$
10. ${}^{18}_{9}\mathrm{F} \rightarrow {}^{18}_{10}\mathrm{Ne} + \_\_\_\_$
11. ${}^{49}_{24}\mathrm{Cr} \rightarrow \_\_\_\_ + {}^{0}_{+1}e$
12. ${}^{239}_{94}\mathrm{Pu} + \_\_\_\_ \rightarrow {}^{241}_{95}\mathrm{Am} + {}^{1}_{1}p + {}^{1}_{0}n$
13. ${}^{7}_{3}\mathrm{Li} + {}^{7}_{3}\mathrm{Li} \rightarrow {}^{4}_{2}\mathrm{He} + \_\_\_\_$
14. ${}^{14}_{6}\mathrm{C} \rightarrow {}^{14}_{7}\mathrm{N} + \_\_\_\_$
15. ${}^{3}_{1}\mathrm{H} + {}^{2}_{1}\mathrm{H} \rightarrow \_\_\_\_ + {}^{1}_{0}n$
16. ${}^{9}_{4}\mathrm{Be} + {}^{4}_{2}\mathrm{He} \rightarrow \_\_\_\_ + {}^{1}_{0}n$
17. ${}^{14}_{7}\mathrm{N} + {}^{4}_{2}\mathrm{He} \rightarrow \_\_\_\_ + {}^{0}_{+1}e$
18. ${}^{26}_{12}\mathrm{Mg} + {}^{1}_{0}n \rightarrow \_\_\_\_ + {}^{0}_{+1}e$
19. ${}^{59}_{27}\mathrm{Co} + {}^{2}_{1}\mathrm{H} \rightarrow \_\_\_\_ + {}^{0}_{+1}e$
20. ${}^{208}_{84}\mathrm{Po} \rightarrow \_\_\_\_ + {}^{4}_{2}\mathrm{He}$

Nuclear Chemistry Worksheet

Complete the following nuclear equations:

1. $\underline{{}^{14}_{6}\mathrm{C}} \rightarrow {}^{0}_{-1}e + {}^{14}_{7}\mathrm{N}$
2. $\underline{{}^{9}_{4}\mathrm{Be}} + {}^{4}_{2}\mathrm{He} \rightarrow {}^{12}_{6}\mathrm{C} + {}^{1}_{0}n$
3. ${}^{239}_{93}\mathrm{Np} \rightarrow {}^{239}_{94}\mathrm{Pu} + \underline{{}^{0}_{-1}e}$
4. $\underline{{}^{4}_{2}\mathrm{He}} + {}^{238}_{92}\mathrm{U} \rightarrow {}^{240}_{94}\mathrm{Pu} + {}^{1}_{0}n + {}^{1}_{0}n$
5. ${}^{1}_{0}n + \underline{{}^{235}_{92}\mathrm{U}} \rightarrow {}^{236}_{92}\mathrm{U}$
6. ${}^{13}_{7}\mathrm{N} \rightarrow \underline{{}^{13}_{6}\mathrm{C}} + {}^{0}_{+1}e$
7. $\underline{{}^{15}_{7}\mathrm{N}} + {}^{1}_{1}\mathrm{H} \rightarrow {}^{12}_{6}\mathrm{C} + {}^{4}_{2}\mathrm{He}$
8. $\underline{{}^{6}_{3}\mathrm{Li}} + {}^{1}_{0}n \rightarrow {}^{3}_{1}\mathrm{H} + {}^{4}_{2}\mathrm{He}$
9. ${}^{226}_{88}\mathrm{Ra} \rightarrow {}^{4}_{2}\mathrm{He} + \underline{{}^{222}_{86}\mathrm{Rn}}$
10. ${}^{18}_{9}\mathrm{F} \rightarrow {}^{18}_{10}\mathrm{Ne} + \underline{{}^{0}_{-1}e}$
11. ${}^{49}_{24}\mathrm{Cr} \rightarrow \underline{{}^{49}_{23}\mathrm{V}} + {}^{0}_{+1}e$
12. ${}^{239}_{94}\mathrm{Pu} + \underline{{}^{4}_{2}\mathrm{He}} \rightarrow {}^{241}_{95}\mathrm{Am} + {}^{1}_{1}p + {}^{1}_{0}n$
13. ${}^{7}_{3}\mathrm{Li} + {}^{7}_{3}\mathrm{Li} \rightarrow {}^{4}_{2}\mathrm{He} + \underline{{}^{10}_{4}\mathrm{Be}}$
14. ${}^{14}_{6}\mathrm{C} \rightarrow {}^{14}_{7}\mathrm{N} + \underline{{}^{0}_{-1}e}$
15. ${}^{3}_{1}\mathrm{H} + {}^{2}_{1}\mathrm{H} \rightarrow \underline{{}^{4}_{2}\mathrm{He}} + {}^{1}_{0}n$
16. ${}^{9}_{4}\mathrm{Be} + {}^{4}_{2}\mathrm{He} \rightarrow \underline{{}^{12}_{6}\mathrm{C}} + {}^{1}_{0}n$
17. ${}^{14}_{7}\mathrm{N} + {}^{4}_{2}\mathrm{He} \rightarrow \underline{{}^{18}_{8}\mathrm{O}} + {}^{0}_{+1}e$
18. ${}^{26}_{12}\mathrm{Mg} + {}^{1}_{0}n \rightarrow \underline{{}^{27}_{11}\mathrm{Na}} + {}^{0}_{+1}e$
19. ${}^{59}_{27}\mathrm{Co} + {}^{2}_{1}\mathrm{H} \rightarrow \underline{{}^{61}_{27}\mathrm{Co}} + {}^{0}_{+1}e$
20. ${}^{208}_{84}\mathrm{Po} \rightarrow \underline{{}^{204}_{82}\mathrm{Pb}} + {}^{4}_{2}\mathrm{He}$