Nuclear Chemistry

Complete the following nuclear reactions:

1.	$^{27}_{13}Al$	+	$^{4}_{2}He$	→	$^{30}_{15}P$	+	$^{1}_{0}n$	Fission
2.	$^{63}_{29}Cu$	+	$^{2}_{1}H$	→	$2^{1}_{0}n$	+	$^{64}_{30}Zn$	Fusion
3.	$^{44}_{20}Ca$	+	$^{1}_{1}H$	→	$^{44}_{21}Sc$	+	$^{1}_{0}n$	Fusion
4.	$^{9}_{4}Be$	+	$^{4}_{2}He$	→	$^{12}_{6}C$	+	$^{1}_{0}n$	Fusion
5.	$^{31}_{15}P$	+	$^{2}_{1}H$	→	$^{32}_{15}P$	+	$^{1}_{1}P$	Fusion
6.	$^{37}_{17}Cl$	+	$^{2}_{1}H$	→	$^{35}_{16}S$	+	$^{4}_{2}He$	Fusion
7.	$^{30}_{15}P$	+	$^{1}_{0}n$	→	$^{30}_{14}Si$	+	$^{1}_{1}H$	Fission
8.	$^{2}_{1}H$	+	$^{2}_{1}H$	→	$^{1}_{1}H$	+	$^{3}_{1}H$	Fusion
9.	$^{11}_{5}B$	+	$^{4}_{2}He$	→	$^{14}_{7}N$	+	$^{1}_{0}n$	Fusion
10.	$^{63}_{29}Cu$	+	$^{2}_{1}H$	→	$^{64}_{30}Zn$	+	$^{1}_{0}n$	Fusion
11.	$^{2}_{1}H$	+	$^{0}_{0}\gamma$	→	$^{1}_{1}H$	+	$^{1}_{0}n$	Fission
12.	$^{31}_{15}P$	+	$^{1}_{1}H$	→	$^{28}_{14}Si$	+	$^{4}_{2}He$	Fission
13.	$^{14}_{7}N$	+	$^{4}_{2}He$	→	$^{17}_{8}O$	+	$^{1}_{1}H$	Fusion
14.	$^{239}_{94}Pu$	+	$^{4}_{2}He$	→	$^{1}_{0}n$ + $^{242}_{96}Cm$			Fusion
15.	$^{63}_{29}Cu$	+	$^{1}_{1}H$	→	$^{38}_{17}Cl$ + $^{1}_{0}n$ + $^{25}_{13}Al$			Fission
16.	$^{63}_{29}Cu$	+	$^{2}_{1}H$	→	$^{64}_{29}Cu$ + $^{1}_{1}p$			Fusion
17.	$^{235}_{92}U$	+	$^{1}_{0}n$	→	$^{95}_{42}Mo$ + $2^{1}_{0}n$ + $^{140}_{50}Sn$			Fission
18.	$^{6}_{3}Li$	+	$^{2}_{1}H$	→	$^{7}_{4}Be$	+	$^{1}_{0}n$	Fusion
19.	$^{3}_{1}H$			→	$^{3}_{2}He$	+	$^{0}_{-1}é$	Fusion
20.	$^{6}_{3}Li$	+	$^{1}_{0}n$	→	$^{4}_{2}He$	+	$^{3}_{1}H$	Fission
21.	$^{122}_{51}Sb$	+	$^{1}_{0}n$	→	$^{122}_{51}Sb$	+	$^{1}_{0}n$	

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22.	$^{214}_{82}Pb$			→	$^{0}_{-1}e$		+	$^{214}_{83}Bi$	Fusion
23.	$^{63}_{29}Cu$	+	$^{2}_{1}H$	→	$^{3}_{1}H$		+	$^{62}_{29}Cu$	Fission
24.	$^{14}_{7}N$	+	$^{1}_{0}n$	→	$^{14}_{6}C$		+	$^{1}_{1}H$	Fission
25.	$^{6}_{3}Li$	+	$^{1}_{1}H$	→	$^{4}_{2}He$		+	$^{3}_{2}He$	Fission
26.	$^{241}_{95}Am$			→	$^{237}_{93}Np$		+	α	
27.	$^{2}_{1}H$	+	$^{2}_{1}H$	→	$^{3}_{2}He$		+	$^{1}_{0}n$	Fusion
28.	$^{28}_{14}Si$	+	$^{2}_{1}H$	→	$^{29}_{14}Si$		+	$^{1}_{1}P$	Fusion
29.	$^{9}_{4}Be$	+	$^{4}_{2}He$	→	$^{6}_{3}Li$		+	$^{7}_{3}Li$	Fission
30.	$^{59}_{27}Co$	+	$^{1}_{0}n$	→	$^{60}_{27}Co$		+	$^{0}_{0}\gamma$	Fusion
31.	$^{63}_{29}Cu$	+	$^{2}_{1}H$	→	$^{61}_{28}Ni$		+	$^{4}_{2}He$	Fission
32.	$^{40}_{18}Ar$	+	$^{2}_{1}H$	→	$^{41}_{18}Ar$		+	$^{1}_{1}P$	Fusion
33.	$^{6}_{3}Li$	+	$^{2}_{1}H$	→	$^{1}_{0}n$	+ $^{3}_{2}He$		+ $^{4}_{2}He$	Fusion
34.	$^{29}_{14}Si$	+	$^{2}_{1}H$	→	$^{1}_{0}n$		+	$^{30}_{15}P$	Fusion
35.	$^{11}_{5}B$	+	$^{1}_{1}H$	→	3X	(X = ?)		$^{4}_{2}He$	Fission

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