

Nuclear Equations

Directions: Complete the following nuclear equations and list the type of decay (alpha, α , beta, β , or gamma, γ) to the right of the equation.

	Type of Decay
1. $^{214}_{84}\text{Po} \rightarrow ^{210}_{82}\text{Pb} + \underline{\hspace{2cm}}$	_____
2. $^{222}_{86}\text{Rn} \rightarrow \underline{\hspace{2cm}} + ^4_2\text{He}$	_____
3. $^{230}_{90}\text{Th} \rightarrow ^{226}_{88}\text{Ra} + \underline{\hspace{2cm}}$	_____
4. $^{214}_{82}\text{Pb} \rightarrow \underline{\hspace{2cm}} + ^0_{-1}\text{e}$	_____
5. $^{226}_{88}\text{Ra} \rightarrow \underline{\hspace{2cm}} + ^4_2\text{He}$	_____
6. $^{239}_{93}\text{Np} \rightarrow \underline{\hspace{2cm}} + ^0_{-1}\beta$	_____
7. $\underline{\hspace{2cm}} \rightarrow ^{234}_{90}\text{Th} + ^4_2\text{He}$	_____
8. $^{234}_{92}\text{U} \rightarrow ^{234}_{93}\text{Np} + \underline{\hspace{2cm}}$	_____
9. $^{206}_{82}\text{Pb} + ^4_2\text{He} \rightarrow \underline{\hspace{2cm}}$	_____
10. $^{254}_{91}\text{Pa} \rightarrow \underline{\hspace{2cm}} + ^0_{-1}\text{e}$	_____
11. $^{226}_{88}\text{Ra} \rightarrow \underline{\hspace{2cm}} + ^4_2\text{He} + \text{gamma rays}$	_____
12. $^{214}_{82}\text{Pb} \rightarrow \underline{\hspace{2cm}} + ^0_{-1}\text{e} + ^0_0\gamma$	_____

NUCLEAR EQUATIONS WORKSHEET

1. Write a nuclear equation for the alpha decay of $^{231}_{91}\text{Pa}$.
2. Write a nuclear equation for the beta decay of $^{223}_{87}\text{Fr}$.
3. Write a nuclear equation for the alpha decay of $^{149}_{62}\text{Sm}$.
4. Write a nuclear equation for the beta decay of $^{165}_{61}\text{Pm}$.
5. Write a nuclear equation for the alpha decay of $^{249}_{101}\text{Md}$.
6. Write a nuclear equation for the alpha decay of $^{146}_{62}\text{Sm}$.
7. Write a nuclear equation for the beta decay of $^{198}_{85}\text{At}$.
8. Write a nuclear equation for the alpha decay of $^{150}_{64}\text{Gd}$.
9. Write a nuclear equation for the beta decay of $^{162}_{54}\text{Xe}$.
10. Write a nuclear equation for the beta decay of $^{120}_{55}\text{Cs}$.