

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.	$^{214}_{82}\text{Pb} \rightarrow \underline{\hspace{2cm}} + ^0_{-1}\text{e} + ^0_{\alpha}\gamma$	_____

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 $^{145}_{62}\text{Sm}$.

7. Write a nuclear equation for the beta decay of $^{198}_{85}\text{At}$.

8. Write a nuclear equation for the alpha decay of $^{159}_{64}\text{Gd}$.

9. Write a nuclear equation for the beta decay of $^{162}_{64}\text{Xe}$.

10. Write a nuclear equation for the beta decay of $^{120}_{55}\text{Cs}$.