

Writing Nuclear Equations

Complete or write the nuclear equations as indicated.

1. alpha decay of radon-217

What is the symbol for an alpha particle? _____

The atomic number of radon (Rn) is _____, so radon has _____ protons.

The mass number of radon-217 is _____.

Radon-217 has _____ neutrons.

During alpha decay, the number of protons _____ by _____, and the mass number _____ by _____.

Write the complete equation for the alpha decay of radon-217:

2. ${}_{17}^{42}\text{Cl} \rightarrow ? + {}_{-1}^0\text{e}$.

The atomic number of chlorine (Cl) is _____, so chlorine has _____.

The mass number of chlorine-42 is _____, so chlorine-42 has _____ total protons and neutrons.

Chlorine-42 has _____ neutrons.

During beta decay, the number of protons increases/decreases (circle one).

During beta decay, the number of neutrons _____.

Write the complete equation for the beta decay of chlorine-42:

Writing Nuclear Equations (continued)

3. beta decay of silver-106

The atomic number of silver (Ag) is _____, so silver has _____ protons.

The mass number of silver-106 is _____.

Silver-106 has _____ neutrons.

During beta decay, the number of protons _____ by 1, and the number of neutrons _____.

Write the complete equation for the beta decay of silver-106:

4. the gamma decay of titanium-44

The atomic number of titanium (Ti) is _____, so titanium has _____ protons.

The mass number of titanium-44 is _____.

Titanium-44 has _____ neutrons.

What is the symbol for a gamma ray? _____

During gamma decay, the number of protons _____, and the number of neutrons _____.

Write the complete equation for the gamma decay of titanium-44: