

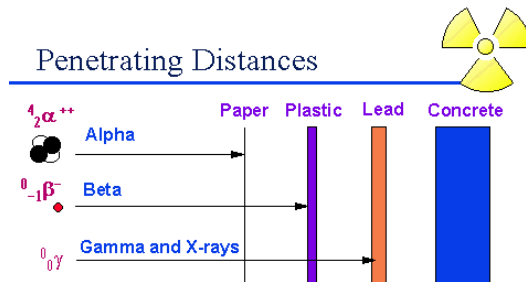
1. Write the symbols for the three types of radiation:

Alpha radiation:

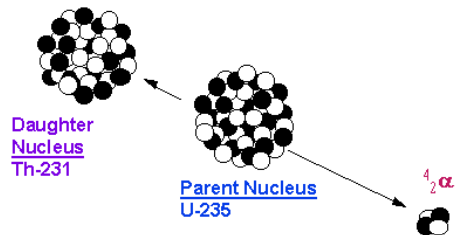
Beta radiation:

Gamma radiation:

2. Any type of radiation can harm cells and the human body but tell which is typically the most harmful by looking at the diagram:

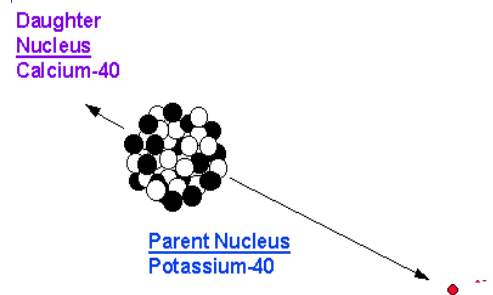


3. Which type of radioactive decay is diagramed below (alpha, beta, or gamma?):



4. From the diagram and the information in a periodic table, write the Nuclear equation for the radioactive decay diagramed above:

5. What type of radioactive decay is diagramed to the right (alpha, beta, or gamma?):



6. From the diagram and the information in a periodic table, write the Nuclear equation for the radioactive decay diagramed above:

7. List the following as either alpha, beta, or gamma:

- creates a new proton that was not there before.
- creates a new electron that was not there before.
- does not change the mass of the original atom, even a little bit.
- a chunk of the old nucleus comes off with 2 protons and 2 neutron in the chunk.
- which 2 types always changes the original element to a new different element.
- blows a neutron apart.

8. Write a nuclear equation for the alpha decay of  ${}^{231}_{91}\text{Pa}$

9. Write a nuclear equation for the beta decay of  ${}^{223}_{87}\text{Fr}$

10. Write a nuclear equation for the alpha decay of  ${}^{149}_{62}\text{Sm}$

11. Write a nuclear equation for the beta decay of  ${}^{165}_{61}\text{Pm}$

12. The alpha decay of radon-198

13. The beta decay of Uranium-237

#### FILL IN THE MISSING INFORMATION

