

Radioactive Decay Practice

1. What are the four radioactive isotopes listed on the reference tables?
 - a. _____
 - b. _____
 - c. _____
 - d. _____

2. What is the decay product (daughter) of the following radioactive isotopes?
 - a. Carbon 14 → _____
 - b. Potassium-40 → _____
 - c. Uranium-238 → _____
 - d. Rubidium-87 → _____

3. What is the half-life of the following radioactive isotopes (not scientific notation)?
 - a. Carbon 14: _____
 - b. Potassium-40: _____
 - c. Uranium-238: _____
 - d. Rubidium-87: _____

4. If Carbon-14 goes through 2 half-lives...
 - a. How many years have gone by? _____
 - b. What percentage of the original mass will remain? _____

5. If Potassium-40 goes through 3 half-lives...
 - a. How many years have gone by? _____
 - b. What percentage of the original mass will remain? _____

6. If you begin with a 400 gram sample of Rubidium-87 and only 100 grams remain...
 - a. How many half-lives have gone by? _____
 - b. How old is the sample? _____

7. If 12.5 pounds of a 100 pound chunk of Carbon-14 remain...
 - a. How many half-lives have gone by? _____
 - b. How old is the sample? _____

8. Which radioactive isotope would be best used in dating the following items:
 - a. A buried tree stump: _____
 - b. The oldest known rocks on Earth: _____

9. Why would Carbon dating not be a useful way to date Coelopyhsis fossils?

