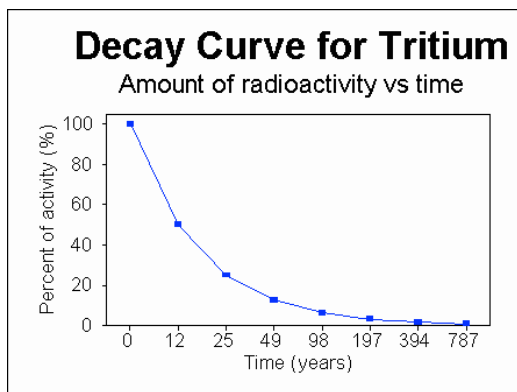


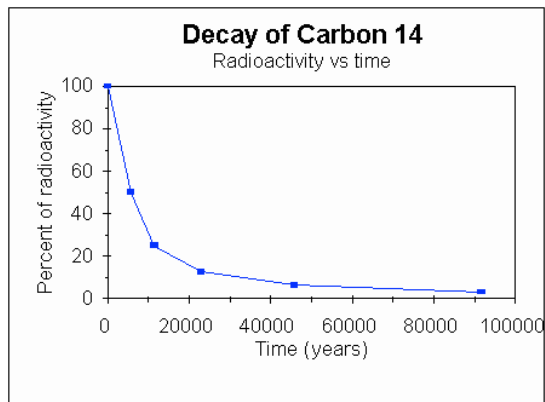
Review: Absolute Dating

1. What does a **radioactive element** release/give off? _____
2. A **half-life** is the _____ it takes for _____ of the radioactive elements to _____.
3. If a rock contains **50% radioactive material**, how many half-lives have gone by? _____
4. If a rock contains **25% radioactive material**, how many half-lives have gone by? _____
5. If a rock contains **12.5% radioactive material**, how many half-lives have gone by? _____
6. A radioactive element has a **half-life of 15 years**. A rock contains **25% radioactive material**.
First figure out how many half-lives have passed if 25% radioactivity remains _____
Then multiply the length of the half-life by the number that has passed to give you the age of the rock.
How old is the rock? _____
7. A radioactive element has a **half-life of 20 years**. A rock contains **6.25 % radioactive material**.
How old is the rock? _____



- Use the Decay curve for Tritium.

8. As time increases, to the amount of radioactivity in Tritium _____
9. How old is a rock that has 50% Tritium? _____
10. How old is a rock that has 25% Tritium? _____
11. How many years are in the half-life of Tritium? _____



- Use the Carbon 14 Decay curve

12. How old is a rock with 25 % Carbon 14 _____
13. How old is a rock with 50 % Carbon 14 _____
14. **Estimate the number of years in the half-life of Carbon 14** using the graph _____.
15. Carbon 14 is used to find the age of **organic** fossils, which means that they were once _____

Use the table below to help you answer the following questions.

Original Radioactive material	Daughter Material	Half-life
U-235	Pb-207	713 Million years
U-238	Pb-206	4.5 billion years
K-40	Ar-40	1.3 billion years

16. A rock contains 25 units of **U-235** and 75 units of **Pb-207**. How old is the rock?
17. A rock contains 50 units of **U-238** and 50 units of **Pb-206**. How old is the rock?
18. A rock contains 12.5 units of **K-40** and 87.5 units of **Ar-40**. How old is the rock?