

Name: _____

Date: _____ Period: _____

Worksheet: Absolute Dating II

1. The table below gives information about the radioactive decay of carbon-14. Part of the table has been deliberately left blank.

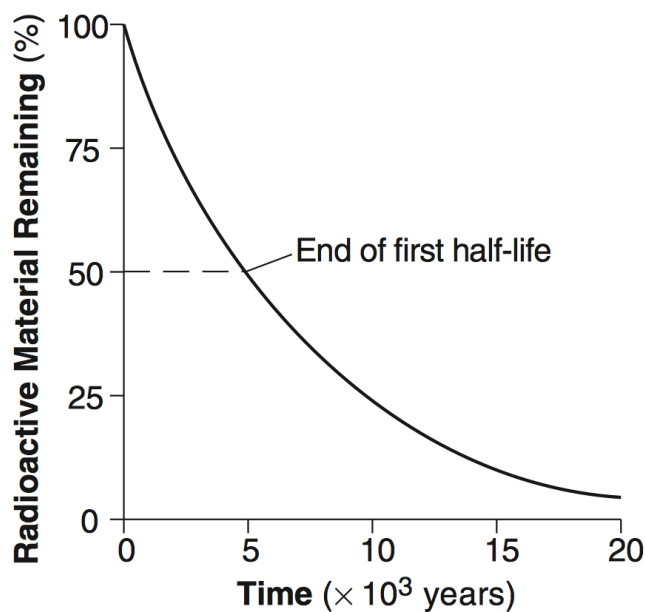
Half-life	Percent of Original C-14	Number of Years
0	1	0
1	1/2	5,700
2	1/4	11,400
3	1/8	17,100
4	1/16	
5		
6		
7		

After how many years will 1/128 gram of the original carbon-14 remain?

- a. 22,800 years
 - b. 28,500 years
 - c. 34,200 years
 - d. 39,900 years
2. A rock contains uranium-238, which has a half-life of 4.5×10^9 years. If the rock is crushed and heated, the half-life of the uranium-238 it contains will
- a. increase
 - b. remain the same
 - c. decrease
3. If the amount of carbon-14 in the original sample had been 48 grams, about how much carbon-14 would have been left after 17,100 years?
- a. 12 grams
 - b. 6 grams
 - c. 3 grams
 - d. 24 grams

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4. A sample of rock contained 100 grams of potassium-40 when it was formed. Today the rock contains 50 grams of potassium-40. What is the age of the rock?
- 1.3×10^9 years
 - 5.6×10^9 years
 - 2.8×10^9 years
 - 4.5×10^9 years
5. The graph below shows the decay of a radioactive material over time.



How long does it take for this radioactive material to decay through 2 half-lives?

- 1×10^3 years
 - 5×10^3 years
 - 10×10^3 years
 - 40×10^3 years
6. Due to radioactive decay, an igneous rock sample now contains one-fourth of the amount of potassium-40 that it originally contained. The age, in years, of this rock sample is approximately
- 0.7×10^9 years
 - 2.6×10^9 years
 - 1.3×10^9 years
 - 5.2×10^9 years