Half-Life Data Sheet

Name: _____   Date: _____

Each radioactive (unstable) element has a different half-life. Hypothesize what half-life is:

_____

_____

_____

Complete the half-life demonstration as directed by your teacher.

Calculate the number of radon atoms remaining after each half-life starting with a radon sample of 400 atoms. Write the number of atoms in the "Number of Remaining Radon Atoms" column. Round decimals to the nearest hundredth (For example: .474 = .47). Plot the number of radioactive atoms on the graph according to the half-life number.

Half-Life Number	Number of Radon Atoms
0	400
1 (3.8 days)	
2 (7.6 days)	
3 (11.4 days)	
4 (15.2 days)	
5 (19 days)	
6 (22.8)	
7 (26.6 days)	
8 (30.4 days)	
9 (34.2 days)	
10 (38 days)	
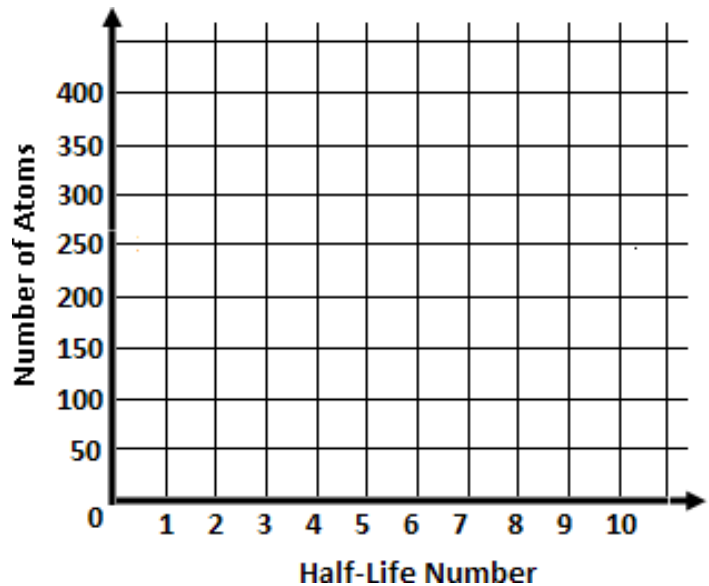
1. Observations:

_____

_____

2. Conclusions:

    _____

    _____

3. Why is it useful to know the half-life of radioactive materials?

    _____

    _____

    _____

    _____

4. Radon is the second leading cause of lung cancer. How does the half-life of radon and its decay products
    cause damage to lung tissue that can lead to lung cancer over the course of a lifetime?

    _____

    _____

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    _____

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RadTown Radon Activity Set

EPA 402-B-19-054

https://www.epa.gov/radtown/radtown-radon-activity-4-half-life-radon