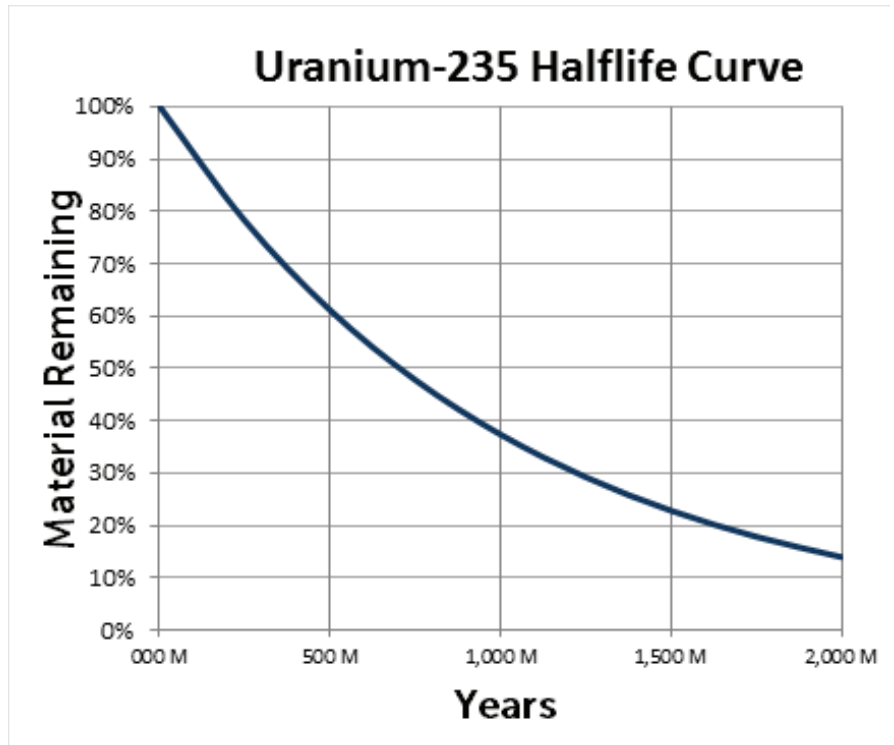


# Half Life Calculations

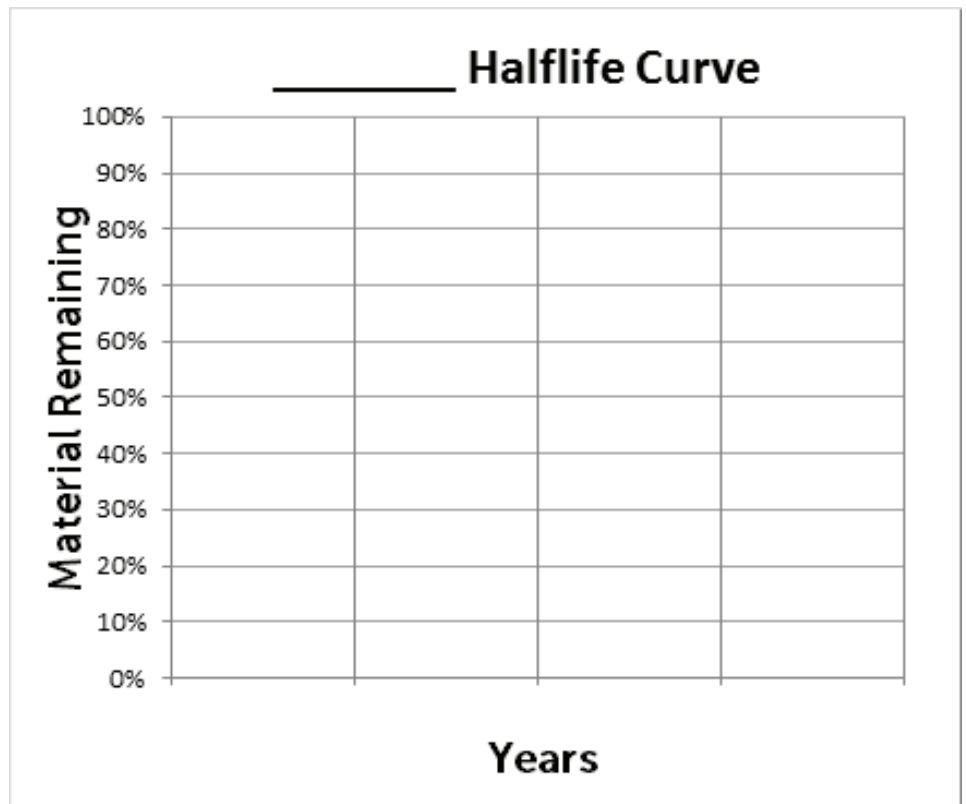
1. What is the approximate half-life of Uranium-235?
2. How much U-235 is left after 800,000,000 years?
3. If a fossil contains 10% of its original U-235, how old is it?
4. Fossils that are more than how many years old could not be dated with U-235?



Graph the Isotope data

Plot the data below on the graph to the right. Use the data to answer Questions 1-4 on the next page.

Years	Pu-244 Remaining
0	100.0%
50,000,000	65.0%
100,000,000	42.0%
150,000,000	27.0%
200,000,000	18.0%
250,000,000	11.0%
300,000,000	7.0%
350,000,000	5.0%
400,000,000	3.0%



## Half Life Calculations

**10 points**

1. What is the approximate half-life of of your isotope?
2. How much Pu-244 is left after 80 million years?
3. If a fossil contains 10% of its original U-244 how old is it?
4. Fossils that are more than how many years old could not be dated with U-244?

Given the isotope data on pages 3 and 4 of this exam, answer the following questions:

5. What are the full names of the Isotopes listed below?
6. Which isotope would be best suited to data an Gerrothorax fossil? Why?
7. Which isotope would be best suited to date an Gastornis fossil? Why?
8. Which isotope would be best suited to date a Acanthostega fossil? Why?

Isotope	Half-life
Pu-244	80,000,000
U-235	703,800,000
Po-40	1,277,000,000