

Lab: Decay Series

Graph the following decay series:

ADD ALL ATOMIC NUMBERS!!!

Element	Decay Mode	Transmutation Equation
^{238}U	Alpha	$^{238}\text{U} \rightarrow ^4\text{He} + ^{234}\text{Th}$
^{234}Th	Beta & Gamma	$^{234}\text{Th} \rightarrow ^0\beta + ^0\gamma +$
	Beta & Gamma	
	Alpha	
	Alpha & Gamma	
	Alpha & Gamma	
	Alpha	
	Alpha	
	Beta & Gamma	
	Beta & Gamma	
	Alpha & Gamma	
	Beta	
	Beta & Gamma	
	Alpha	
	Stable	

Questions:

1. What happens to the mass of a radioisotope when an alpha particle is released?

2. What happens to the mass of a radioisotope when a beta particle is released?

3. What happens to the mass of a radioisotope when an gamma ray is released?

4. What happens to the number of protons when an alpha particle is released?

5. What happens to the number of protons when a beta particle is released?

6. What happens to the number of a protons when an gamma ray is released?

7. What is happening to a radioisotope when it is unstable?

8. What is the radioisotope doing to become stable?

9. What happens to a radioisotope when it becomes stable?

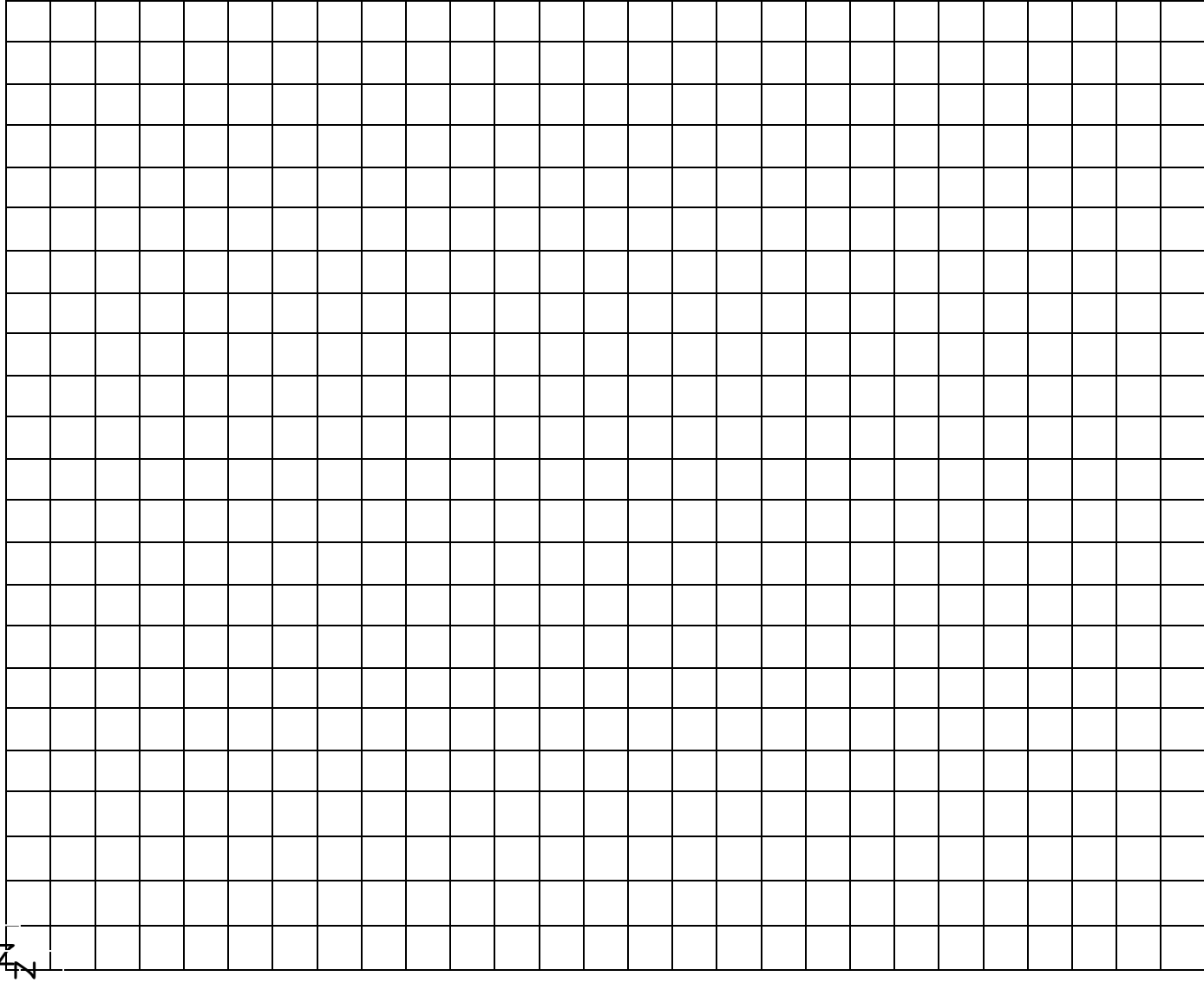
Graph:

1. Title Graph
2. Y-Axis: Atomic Mass 206-238 (increments of 2 per box)
3. X-Axis: Atomic Number 82-92 (skip every other box)
4. Alpha Decay - Connect point in Red
5. Beta Decay - Connect points in BLUE

Hint: Connect points
AS YOU GO!

Title: _____

Atomic Mass: 206-238



Atomic Number: 82-92

Key: Alpha - _____, Beta - _____