Name:

Period:

Radioactive Decay Homework

1. Define the following terms:
   1. **Radioactive –**
   2. **Decompose –**
   3. **Atomic Number –**
   4. **Mass Number –**
   5. **Alpha Decay -**
   6. **Beta Decay –**
   7. **Positron -**
   8. **Gamma Decay –**
2. You are given Radium-226.
   1. Write it in the correct form:
   2. Show the **alpha decay** reaction. What element is formed?
   3. Show the reaction if it underwent **beta decay**. What element is formed?
   4. Show the reaction if it underwent **positron emission**. What element is formed?
   5. Show the reaction if it underwent **gamma decay**. What element is formed?
3. You are given Americium-235.
   1. **Alpha Decay:**
   2. **Beta Decay:**
   3. **Positron Emission**:
   4. **Gamma Decay**:
4. Follow the instructions CAREFULLY for the next set of problems. You START with Uranium-238.
   1. Uranium-238 undergoes ALPHA decay. Product A:
   2. Product A undergoes BETA decay: Product B:
   3. Product B undergoes BETA decay: Product C:
   4. Product C undergoes ALPHA decay: Product D:
   5. Product D undergoes ALPHA decay: Product E:
   6. Product E undergoes POSITRON EMISSION: Product F:
   7. Product F undergoes ALPHA decay: Product G:
   8. Product G undergoes ALPHA decay: Product H:
   9. Product H undergoes GAMMA decay: Product I:
   10. Product I undergoes POSITRON EMISSION: Product J:
   11. Product J undergoes ALPHA decay: Product K:
   12. Product K undergoes GAMMA decay: Product L:
   13. Product L undergoes BETA decay: Product M:
   14. FINAL PRODUCT:
5. Using your results in Problem 4, make a graph of your results. WRITE ON THIS PAPER.

Directions:

* Label Mass # in the Y-axis and Atomic # in the X-axis.
* Put zero in the BOTTOM LEFT
* START Y-Axis with 206, GO UP BY 4’s until you get to 238
* START X-Axis with 80, GO ACROSS BY 1’s until you get to 92