

Half Life Calculations

Directions: Use the information to solve the following problems. **YOU MUST SHOW YOUR WORK LIKE WE DID TOGETHER IN CLASS!** Put a box around your final answer!

- 1) After 5 half lives, 90 grams of an original sample remain unchanged. What was the mass of the original sample?
- 2) If 58.4 grams of a sample are left after 8 half lives, what was the mass of the sample you started with?
- 3) If 15 grams of a sample are left unchanged after 4 half lives, what was the mass of the sample you started with?
- 4) How many grams of a 13.5 gram sample will remain after 40 days if the half life is 4 days?
- 5) After 7 half lives, 13.8 pounds of an original sample remain unchanged. What was the mass of the original sample?
- 6) How many grams of a 72 gram sample will remain after 300 years? Half life = 100 years
- 7) If the half life is 1 month, and you started with 120 grams of a sample, how many grams are left after 3 years?
- 8) A radioactive isotope has a half life of 15 days. How many grams of the original mass will remain after 60 days if you start with 3.5 kg ?
- 9) If you start with 40 grams of a sample and it has a half life of 1,000,000 years, how much of the sample will be left after 4,000,000 years?
- 10) Draw a visual that represents half life.

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