

Radioactive Decay Simulation Questions:

1. In our model of radioactive decay, what did each of the following items represent?

- a)the pennies
- b)the beans
- c)the box
- d)shaking the box

2.If there were 25 pennies and 75 beans in the box, how many 'shakes' had occurred in the box? How many half lives is this?

3.If the half-life of radioactive pennies were 1000 years, how old would the box in question 2 be?

4.How do scientists use radioactive decay to determine the age of a rock or bone sample?

5.Pretend a Mammoth bone was found that contained Carbon 14 (half life 6000 years).

If the bone has 12.5% of the parent isotope remaining, how old is the bone? Explain...

6. How much of Carbon 14 would be in a sample 27,000 years old. (use your graph, explain...)