Name_____
Period_____

Review

1. Pretend you are given three radioactive rocks-one an alpha emitter, one a beta emitter, and one a gamma emitter. You can throw one away, but of the remaining two you must hold one in your hand and place the other in your pocket. What can you do to minimize you exposure to radiation?

2. a) If you have a sample of a radioactive isotope that has a half-life of one day, how much of the original sample is left at the end of the second day? The third day?

b) What becomes of the atoms of the sample that decay?

3. Suppose an archeologist extracts 1.0 g of carbon from an ancient ax handle and finds that carbon to be one-fourth as radioactive as 1.0 g of carbon extracted from a freshly cut tree branch. About how old is the ax handle?

4. The isotope cesium-137, which as a half-life of 30 years, is a product of nuclear power plants. How long will it take this isotope to decay to one-sixteenth its original amount?