Name : _____   Date : _____

Radioactive Isotopes Half-life MCQ Worksheet

1. When a radioactive isotope decays over time, its half-life

   a. Decreases   b. Increases   c. Stays the same

2. As the temperature of a radioactive isotope decreases, its half-life

   a. Decreases   b. Increases   c. Stays the same

3. A sample of radioactive isotope that initially had a weight of 80 milligrams. It decays to 5 milligrams after 32 days. What is its half-life?

   a. 8 days   b. 12 days   c. 4 days

4. The half-life of iodine-131 is 8.07 days. How much of a sample of iodine-131 is left after 24.21 days?

   a. ½   b. ⅓   c. ⅛

5. What is the ratio of uranium-238 to lead-206 in a mineral used to determine?

   a. Age   b. Density   c. Solubility

6. What is the isotope carbon-14 used for?

   a. Controlling fission reactions
   b. Determining the age of the sample
   c. controlling speeds of neutrons

7. An isotope has a half-life of 2.5 minutes. What percentage of the isotope is left after 10 minutes?

   a. 50 %   b. 3.125%   c. 6.25 %

8. How many milligrams of tritium will remain after 49.2 years if the starting amount is 32 mg? The half-life of tritium is 12.3 years.

   a. Age   b. Density   c. Solubility

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Answers

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