ABSOLUTE DATING WORKSHEET

1. A rock sample containing Potassium-40 (K^{40}) is found to be 3.9×10^9 years old. What percentage of the original Potassium-40 (K^{40}) is left in the sample?

2. A rock sample contained 16 grams of Potassium-40 (K^{40}) when it formed, but now only 4 grams remain. How old is the rock sample?

3. An ancient skeleton is found to contain a ratio of 25% Carbon-14 (C^{14}) to 75% Nitrogen-14 (N^{14}). How old is the skeleton?

4. After how many half-life periods will the ratio of Uranium-238 (U^{238}) to lead-206 (Pb^{206}) be approximately 3% to 97%?

5. How much of the Earth's original supply of Uranium-238 (U^{238}) still remains since the beginning?

6. What is the half-life of substance A?

7. What is the half-life of substance B?

8. What is the half-life of substance C?

9. A Uranium mineral is obtained from an intrusive granite formation. It is then analyzed and found to contain about 1 gram of Lead-206 (Pb^{206}) to every 3 grams of Uranium-238 (U^{238}). Approximately how old is the granite?

10. If organic matter, containing Carbon, which has a half-life of 5600 years died only 10 years ago, would you expect to be able to determine an accurate Carbon-14 (C^{14}) age for it? Explain!

11. What if it had died 100,000 years ago? Would Carbon-14 (C^{14}) give you an accurate age? Explain!