GEOLOGY 12 Name _____
CHAPTER 8 WORKSHEET #2
RELATIVE TIME AND ABSOLUTE TIME

Match the descriptions on the right to the persons on the left. Place the letter of the corresponding description in the blank by each name. You may use some descriptions more than once.

_____ 1. Henri Becquerel
_____ 2. Lord Kelvin
_____ 3. Nicholas Steno
_____ 4. Georges Buffon
_____ 5. John Joly
_____ 6. William Smith
_____ 7. Archbishop Ussher
_____ 8. C.D. Walcott

A. calculated age of earth from number of generations in the Bible
B. proposed the Law of Faunal Succession
C. calculated age of earth based on cooling rate of the earth from an initially molten state
D. proposed the principles of Superposition and Original Horizontality
E. discovered radioactivity of uranium
F. calculated age of earth based on rates of sedimentation
G. calculated age of earth based on amount of salt in the oceans
H. calculated age of earth based on rate of "burning" of the sun

9. After two half-lives, how much radioactive parent isotope will be left in a given mineral?
A. 133% B. 50% C. 25% D. 33%

10. If the ratio of daughter isotope to parent isotope is 7, how many half-lives have passed?
A. can't tell from information given
B. seven
C. one
D. three

11. As each half-life passes, the amount of daughter product will
A. decrease by half each time
B. increase by doubling each time
C. never exceed the amount of parent isotope remaining
D. increase by the amount of parent isotope which has decayed

12. A mineral being used for radiometric dating contains 600 units of the daughter isotope and 200 units of radioactive parent isotope. How many half-lives have passed?
A. two
B. none
C. three
D. can't tell from the information given

13. A mineral contains an amount of daughter isotope equal to the amount of radioactive isotope remaining in it. The half-life for the radioactive isotope is 250 million years. How old is the mineral?
A. 250 million years
B. 125 million years
C. 500 million years
D. just formed; no decay has occurred

14. Rubidium-87 has a half-life of 48.8 billion years. Let's assume that radioactive rubidium would be safe to be around if there was less than 1/64 the original number of radioactive atoms left. How many years would that take?
A. about 800,000 years
B. a little over 290 billion years
C. about 3200 million years
D. cannot be calculated from the information given