

Use the table in your book on page 120 and the table on page 121 to answer the following questions.

1. A rock has 100% of its parent atoms, Uranium-238, remaining. How old is the rock?
 - a. Number of half lives: _____
 - b. Half-life length: _____
 - c. Age of rock: _____
2. A biotic substance has 6.25% of its parent atoms, Carbon-14, remaining. How old is the biotic substance?
 - a. Number of half lives: _____
 - b. Half-life length: _____
 - c. Age of substance: _____
3. A rock has 25% of its parent atom, Uranium-235, remaining. How old is the rock?
 - a. Number of half lives: _____
 - b. Half-life length: _____
 - c. Age of rock: _____
4. A rock has 12.5% of its parent atom, Potassium-40, remaining. How old is the rock?
 - a. Number of half lives: _____
 - b. Half-life length: _____
 - c. Age of rock: _____
5. A rock has 50% of its **daughter** atoms formed from Uranium-235. How old is the rock?
 - a. Number of half lives: _____
 - b. Half-life length: _____
 - c. Age of rock: _____

TURN OVER FOR MORE QUESTIONS

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6. A rock has 75% of its daughter atoms formed from Potassium-40. How old is the rock?
- Number of half lives: _____
 - Half-life length: _____
 - Age of rock: _____
7. A dead tree has 87.5% of its daughter atoms formed from Carbon-14. How old is the rock?
- Number of half lives: _____
 - Half-life length: _____
 - Age of tree: _____
8. In a sample rock there are 100,000,000 atoms of a parent element, Uranium-235, when it first formed. Measured now, there are only 6,250,000 atoms of the parent element left. How old is the rock?
- Percent of parent atoms remaining: _____
 - Number of half lives: _____
 - Half-life length: _____
 - Age of rock: _____

CHALLENGE

9. In a sample biotic substance there are 753,211 atoms of a parent element, Carbon-14, remaining. The substance has gone through 3 half lives.
- How many parent atoms were in the substance when it first formed? _____
 - How many daughter atoms were in the substance when it first formed? _____
 - How many daughter atoms are in the substance now? _____
 - What percent of the atoms are of the parent element? _____
 - What percent of the atoms are of the daughter element? _____