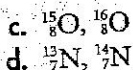
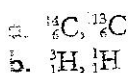


## Honors Chemistry: Homework Set 3-2

1. Identify the more stable isotope in each pair.



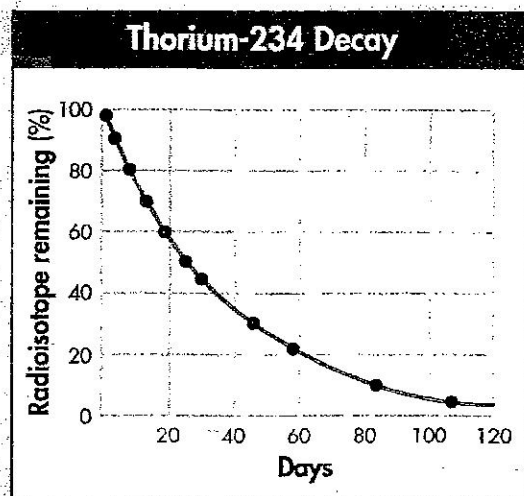
2. How much of a sample of a radioisotope remains after one half-life? After two half-lives?

3. A radioactive isotope has a half-life of 4 days. How much of a 60-gram sample of this radioisotope remains at the end of each time period?

- 4 days
- 8 days

4. A patient is given 200 mg of iodine-131. The half-life of iodine-131 is 8 days. How much of the isotope will remain in the patient's body after 32 days?

5. The graph shows the radioactive decay curve for thorium-234. Use the graph to answer the questions below.



- What percentage of the isotope remains after 60 days?
- After 40 days have passed, how many grams of a 250-g sample of thorium-234 would remain?
- How long would it take in days for 44 g of thorium-234 to decay to 4.4 g of thorium-234?
- What is the half-life of thorium-234?