**Half Life Practice Problems**

Directions: Solve the following problems involving half-life.

1. Iodine-131 is used to destroy thyroid tissue in the treatment of an overactive thyroid. The half-life of iodine-131 is 8 days. If a hospital receives a shipment of 200 g of iodine-131, how much I-131 would remain after 16 days?
2. Mercury -197 is used for kidney scans and has a half-life of 3 days. If a hospital orders 80g of mercury-197, how much will be left after 12 days?
3. The half-life of strontium-90 is 25 years. How much strontium-90 will remain after 100 years if the initial amount is 4.0 g?
4. If the half-life of uranium-232 is 70 years, how many half-lives will it take for 10 g of it to be reduced to 1.25 g?
5. Technetium-99 is used for brain scans. If a laboratory receives a shipment of 200 g of this isotope and after 24 hours only 12.5 g of this isotope remain, what is the half-life of technetium-99?