**Half-Life Practice Worksheet**

Directions: Answer all questions. **Show all work**. (No work = no credit)

1. Sodium-24 has a half-life of 15 hours. How much Sodium-24 will remain in an 18.0 gram sample after 60 hours?
2. After 42 days, 1 2.0 gram sample of phosphorus-32 contains only 0.25 grams of the isotope. What is the half-life of phosphorus-32?
3. Polonium-214 has a relatively short half-life of 164 seconds. How many seconds would it take for an 8.0 gram sample of this isotope to decay to 0.25 grams?
4. How many days does it take for 16 grams of palladium-103 to decay to 1.0 grams? The half-life of palladium-103 is 17 days.
5. By approximately what **factor** would the mass of a sample of copper-66 decrease in 51 minutes? The half-life of copper-66 is 5.1 minutes.
6. In 5.49 seconds, 1.20 grams of Argon-35 decay to leave only 0.15 grams. What is the half-life of Argon-35?
7. The skeleton of an ancient fish is found to contain 1/8 the amount of Carbon-14 that it contained while it was alive. The half-life of Carbon-14 is 5,730 years. How old was the skeleton?