**Half-life Worksheet**

1. If you have 500g of Polonium with a half-life of 50 years. How much is left after

50 years? \_\_\_\_\_\_ 100 years? \_\_\_\_\_\_\_ 200 years? \_\_\_\_\_\_

1. How many half-lives will pass by the time a 60g sample of Co-60 decays to 15?
2. Thallium-208 has a half-life of 3 minutes. How long will it take for 120.0 g to decay to 15g?
3. If the half-life of iodine-131 is 8 days, how long will it take a 50.00 g sample to decay to 6.25 g?
4. The half-life of hafnium-156 is 0.025 seconds. How long will it take a 560 g sample to decay to 140g?
5. Chromium-48 has a half-life of 22 hours. How long will it take 360.00 g of Chromium-48 to decay to 45g?
6. Potassium-42 has a half-life of 10 hours. How much of an 848 g sample of Potassium-42 will be left after 40 hours?
7. Carbon-14 has a half-life of 5730 years. How much of a 144 g sample of carbon-14 will remain after 17,190years?
8. Cesium-137 has a half-life of 30 years. How much of a 144 g sample of this isotope will be left after 90years?
9. Actinium-226 has a half-life of 25 hours. If 100mg decays over 58 hours, how much will be left of Actinium-226?