

TagsEdited Sep 7, 2021 5:33 PM by [admin...](#)

Worksheet 9.9.21

APES numbers worksheet 9.9.21

Another formula for decay:

amount left = starting amount/ 2^n

n = number of half lives

1. An element has a half-life of 30 days. If the original sample is 100 grams, how many grams will remain after 30 days?
2. How many will remain after 90 days?
3. How many will remain after 45 days?
4. A sample of carbon 14 is found in ancient bones containing 1/64 of the original amount. If the half life for carbon 14 is 5730 years, how old is the bone?
5. How much will be left after another 5730 years?
6. Graph the decay of the bone and attach a photo of your beautiful graph, with years on the X-axis and fraction as the Y-axis
7. A news announcer says: "Iodine 131 has a half life of 8 days, so it will all be gone in just 16 days". What is wrong with this?
8. Which is more acidic: NaOH or HCl? Why?
9. How much more acidic is something with a pH 4 than one of pH 5?
10. Which has a higher Hydrogen ion concentration [H+]?
11. How about pH 4 vs. pH 8?
12. What is the pOH of something with a pH of 4?
13. You are told a solution has a Hydrogen ion concentration of 1×10^{-12} . What is the pH and pOH for this solution?