Radioactive isotopes

1. An isotope has a half-life of 4 yrs. Calculate:
   a) The decay constant per year$^{-1}$, hr$^{-1}$, min$^{-1}$, sec$^{-1}$
   b) The percent of the original activity remaining after 13 months.

2. I$^{131}$ has a half life of 8.1 days. Calculate the fraction of the atoms that decays per year, per day, and per minute.

3. Calculate the weight in gram of calcium -45 in 1 $\mu$ Ci of C$^{45}$. Half life is 163 days.