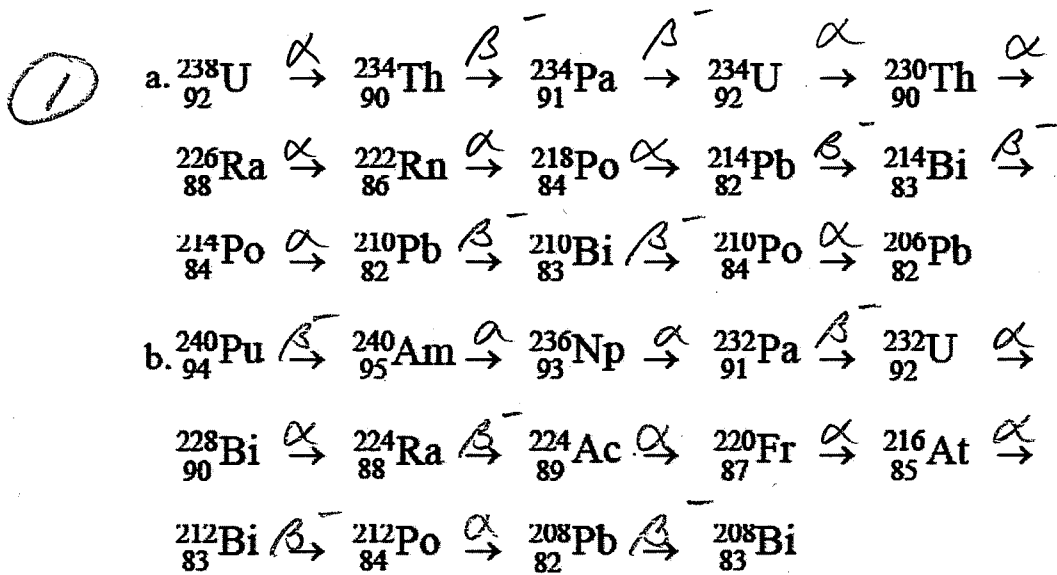


# Radioactivity



② (a)  $n = \frac{t}{T_{1/2}} = \frac{660}{110} = 6$

(b)  $N = \frac{N_0}{2^n} = \frac{10}{2^6} = \underline{0.16 \text{ g}}$

③  $n = \frac{t}{T_{1/2}} = \frac{28650}{5730} = 5$

$\frac{N}{N_0} = \frac{1}{2^n} = \frac{1}{2^5} = \frac{1}{32}$  or 0.03125

④  $\frac{N}{N_0} = \frac{1}{2^n} = \frac{1}{4} \quad n = 2$

$n = \frac{t}{T_{1/2}} \quad T_{1/2} = \frac{t}{n} = \frac{18}{2} = \underline{9 \text{ months}}$