4-52 a) $^{232}_{90}Th_{142} \rightarrow ^{228}_{88}Ra_{140} + ^{4}_{2}He_{2}$

b) Antal mol i 25,0 g ^{232}Th: $n = \frac{m}{M} = \frac{25,0\,g}{232\,g/mol} = 0,107\,mol$

Antal partiklar i 0,104 mol: $N = n \cdot N_A = 0,104\,mol \cdot 6,022 \cdot 10^{23}\,/mol$

$= 6,49 \cdot 10^{22}$ st.

$A = \lambda N = \frac{\ln 2}{T_{1/2}} \cdot N = \frac{\ln 2}{1,4 \cdot 10^{10} \cdot \pi \cdot 10^{7}\,s} \cdot 6,49 \cdot 10^{22}$

$\approx 1,0 \cdot 10^{5}\,Bq$

$T_{1/2} = 14 \cdot 10^{9}\,a.!$