(6.2.)

hmotnost olova, kt. se vytvoří z 1 kg ^{238}U za $2{,}5 \cdot 10^9$ let,
jestliže $T_{1/2}^U = 4{,}46 \cdot 10^9$ let

~~$A_r = \frac{m}{m_u}$~~ $A_r = \frac{m}{u}$ 1 atom

$$m = A_r \cdot u$$

~~chci~~ $M = N \cdot m = 1\,kg$

$$\Rightarrow \boxed{N = \frac{M}{A_r \cdot u}}$$

$$N_0 = \frac{1}{A_r^U \cdot u}$$

kolik zbude uranu? $N = \frac{1}{A_r^U \cdot u} \cdot e^{-t_{země} \cdot \frac{\ln 2}{T_{1/2}^U}}$ ... zbude $(N_0 - N)$ jader Pb vzniklo

$$M_{Pb} = (N_0 - N) \cdot A_r^{Pb} \cdot u = \frac{A_r^{Pb} \cdot u}{A_r^U \cdot u}\left(1 - e^{-t_{země} \cdot \frac{\ln 2}{T_{1/2}^U}}\right)$$

$A_r^U \doteq 238$, $A_r^{Pb} \doteq 206$

$M^{Pb} \doteq 0{,}279\,kg$ //