2-6: ^{82}Pb (LEAD): $82/N_A^C = 1{,}36156081\times10^{-22}$ g; $1000/c = 7{,}34\times10^{24}$ atoms/kg
^{26}Fe (IRON) $26/N_A^B = 4{,}317440\times10^{-23}$ g; $1000/B = 2{,}31\times10^{25}$ atoms/kg
^{26}Fe HAS MORE ATOMS PER Kg

2-7 PROTONS AND NEUTRONS. THE NEUTRONS AND PROTONS ARE HELD BY ELECTRIC FORCES ACTING BETWEEN THEY.

2-8 THE $^{238}_{92}U$ ARE NEGATIVELY CHARGED, HAVING 3 MORE ELECTRONS THAN THE $^{235}_{92}U$

PROBLEMS

2-A1 $3{,}1536\times10^{7}$ SECONDS / YEAR

2-A2 24902 mi × 1,609 km = 40006,7318 Km / $2{,}54\times10^{-3}$ = $1{,}58\times10^{7}$ IN.
1 INCH = 2,54 cm / 1000 = $2{,}54\times10^{-3}$ Km

2-A3 $1{,}29\times10^{-3}$ g/cm³ × 1000 = 1,29 Kg/cm³

2-A4 CARBON DIOXIDE $1{,}977\times10^{-3}$ g/cm³ } $\frac{CD}{A} = 1{,}52900232$
AIR $1{,}293\times10^{-3}$ g/cm³

2-A5 VOLUME = 50 cm³ HELIUM = $0{,}1785\times10^{-3}$ g/cm³
50 cm³ = MASS / DENSITY MASS =
50×10^{7} cm³ = M / $0{,}1785\times10^{-3}$ g/cm² → M = 50×10^{3} cm² ($0{,}1785\times10^{-3}$ g/cm²) = $8{,}925\times10^{3}$ g ≈ 9,05 Kg

2A6 TUNGSTEN HEXAFLUORIDE = 12.9×10^{-8} } $\frac{TH}{A} = 9{,}9367981\times10^{0}$
AIR $1{,}293\times10^{-3}$

2-A7 DENSITY = MASS / VOLUME MERCURY = 136 g/cm³
MASS = 1 Kg
13.6 g/cm³ = 1000 g / VOLUME VOLUME =
$V = \frac{1000g}{13{,}6\ g/cm^3} = 7{,}35294118\times10^{1}$ cm³ /// $7{,}35\times10^{1}$ cm³ ///

2-A8 PYRAMID OF CHEOPS VOLUME = $2{,}4\times10^{12}$ cm³ (LIMESTONE)
LIMESTONE = 2,7 g/cm³ MASS = V (DENSITY)
a) MASS = $6{,}48\times10^{12}$ g MASS = $2{,}4\times10^{12}$ cm³ (2,7 g/cm³)
b) MASS = a/1000 = $6{,}48\times10^{9}$ Kg MASS = $6{,}48\times10^{12}$ g
c) MASS = $6{,}48\times10^{6}$ t

2-A9 DENSITY OF NUCLEAR MATTER (ρ_{NM}) = 2×10^{9} g/cm³
$(0{,}01)^3\times(2\times10^{14}$ g/cm³) = 2×10^{8} g / 1000 = 200 Kg
OF COURSE I CAN LIFT IT HERE, JUST HOLD MY BEER...

06/07/2018
$1\ m^3 = 10^6\ cm^3$