

Further examples

1. Which one is the highest occupied shell of silver?

n=5

2. What is the charge of the following subatomic particles (in units of electron charge ?

- electron -1
- proton +1
- neutron 0

What is the approx mass ratio between:

proton : elektron 2000 : 1

3. Complete the following table :

Symbol	³⁷ Cl	⁴⁰ Ar	⁴⁴ Sc
protons	17	18	21
neutrons	20	22	23
electrons	17	18	18
valence electrons	7	8	21
charge	0	0	0
family	halogens	noble gases	transition metals

4. Natural carbon is composed of 98.90% C-12 and 1.10% C-13. What mass number do you expect?

$$(98,90 / 100) * 12 + (1,10 / 100) * 13$$

$$0,9890 * 12 + 0,0110 * 13 = \mathbf{12,011}.$$

This is also tabulated as a mass number on the periodic table

5. An element E is composed of two isotopes, E-80 and E-84. The mean number of nucleons is 82,6. What is the ratio of the isotopes?

If the fraction of E-80 is designed as x , the fraction of E-84 must be $1-x$.
(The sum of both fractions MUST be 100% = 1!)

$$x * 80 + (1 - x) * 84 = 82,6.$$

$$-4 x = 82,6 - 84$$

$$-4 x = -1,4$$

$$x = 0,35$$

35% E-80 and 65% E-84

6. Find the correct names for the following families of elements denoted by the coloured blocks.

