1. Reaction equations from atom to ion

Example II. 1. demonstrate

from hydrogen to hydride(ion) :

from hydron to hydrogen:

from hydride to hydrogen:

from hydrogen to hydron:

Example II. 1. solve

from strontium to strontium Ion:

from fluorine to fluoride:

from antimonide to antimony:

from gallium (ion) to gallium:

from iodide to iodide:

from phosphorus to phosphide:

2. Construct simple ionic compounds:

Example II. 2. demonstrate

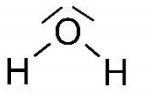
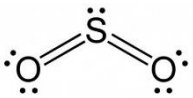
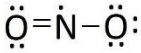
elements	Li + F	Li + O	Be + F	Be + O
ions				
compound				
name				

Example II. 2. solve

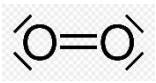
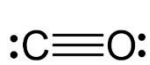
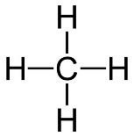
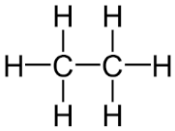
elements	Ca, O	Al, O	B, N	Mg, Cl
ions				
compound				
name				

3. identify simple covalent compunds

Beispiel II. 3. demonstrate

elements	H + O	S + O	N + O	N + O
				
compound				
name				

Beispiel II. 3. selber rechnen

Elements	O + O	C + O	C + H	C + H
				
compound				
name				

4. molecular ions to be remembered

example II 4 solve

chemical formula	charge	common name	systematic name
SO_4^{2-}			Tetraoxidosulfate(2-)
SO_3^{2-}			Trioxidosulfate(2-)
NO_3^-			Trioxidonitrate(1-)
NO_2^-			Dioxidonitrate(1-)
PO_4^{3-}			Tetraxidophosphate(3-)
CO_3^{2-}			Trioxidocarbonate(2-)
CN^-			Nitridocarbonate(1-)
OH^-			Oxidanid, Hydridooxygenate (1-)
O_2^{2-}			Dioxidanediid(2-)
NH_4^+			Azanium
H_3O^+			Oxonium

5. name simple substances, balance indices, establish bonding type

Example II.5. demonstrate

sodium sulfate:

NaCl

strontium chloride:

$Ca_3(PO_4)_2$

gallium arsenide

Example II.5. solve

MgI_2

barium phosphate

Al_2O_3

magnesium chloride

$Ca(NO_3)_2$

aluminium iodide

CO_2

sulfur dioxide

Li_3N

carbon monoxide

6. calculate molar masses for the compounds above

Example II.6. demonstrate

NaCl

sodium sulfate

$Ca_3(PO_4)_2$

strontium chloride

Example II.6. solve

MgI_2

Al_2O_3

barium phosphate

$Ca(NO_3)_2$