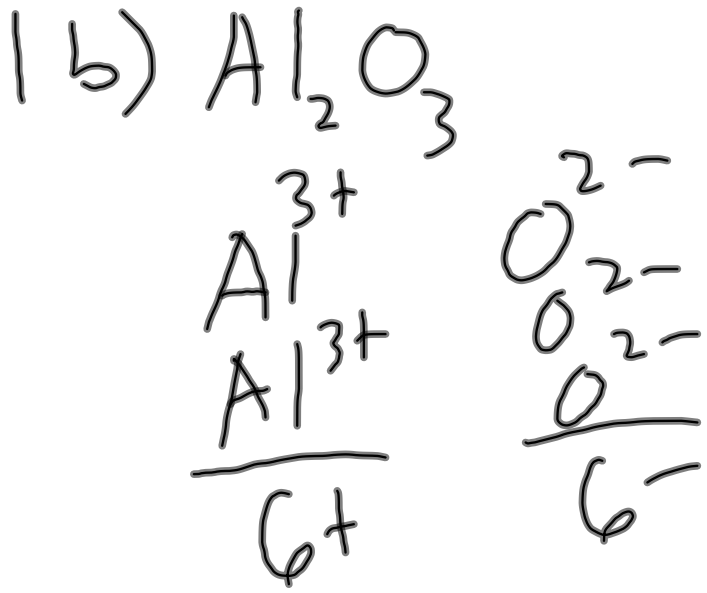
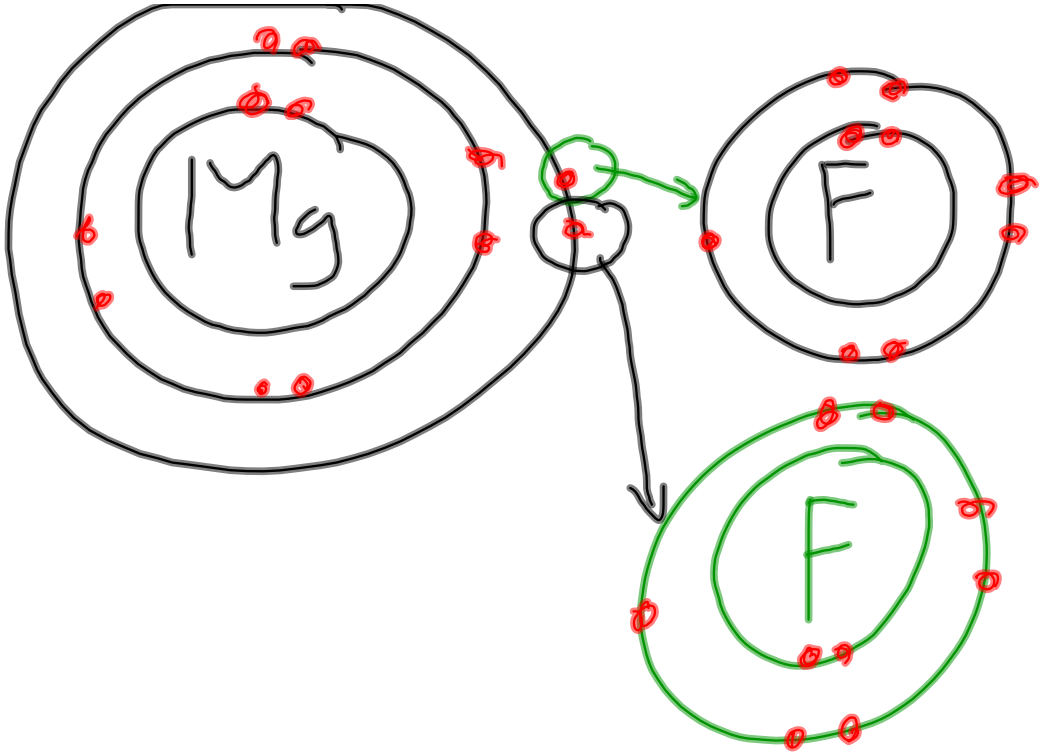
Check Homework - #1-6




Mg
F
F

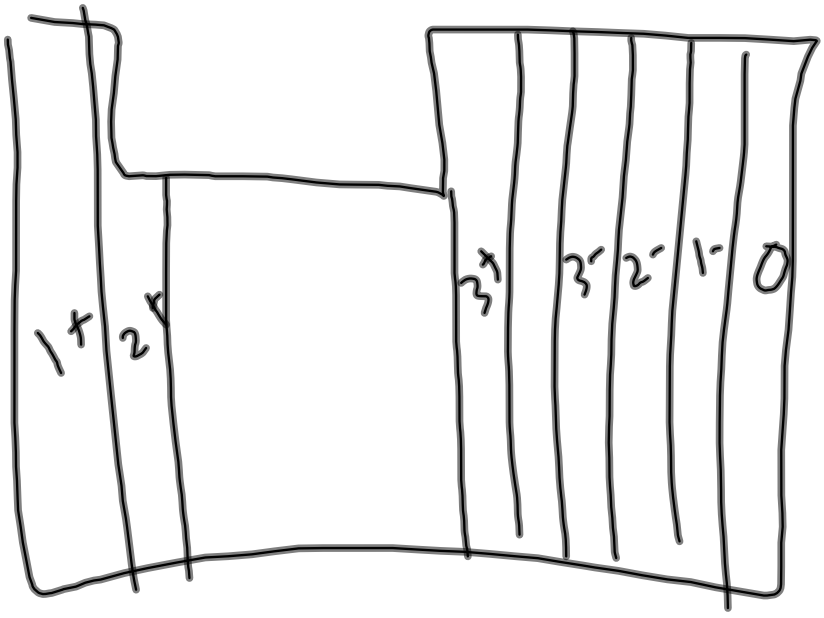
3a) LiF lithium Fluoride

b) $CaBr_2$ calcium bromide

c) Na_3N^2 sodium nitride

d) AlN aluminum nitride

Ca^{2+} Br^- Br^-


1+
2+
3+
3-
2-
1-
0

5. a) NaF

b) BeF_2

c) MgO

d) Al_2S_3

6a) potassium chloride

b) sodium phosphide

c) Calcium fluoride

Multivalent Metals

- some metals have more than one charge
  they are called multi-valent ions
- these elements are found in the middle block of the periodic table
- the charge that is to be used is indicated in brackets with a Roman numeral (Table 2 p. 195)
  Ex. iron(III) oxide

Fe^{3+} O^{2-} Fe_2O_3

ex iron(II) Oxide Fe^{2+} O^{2-} = FeO

Naming Ionic Compounds from Formula (multivalent ions):

- Identify positive ion (metal) and negative ion (nonmetal)
- If metal is multivalent, determine its charge from the formula (balance total positives and negatives) and include in name

Ex. CuCl

Cl^- copper 2+, (1+)

copper(I) chloride

Ex. Fe_3N_2

Iron (2+), 3+ Iron(II)

Nitrogen 3− 3− Nitride

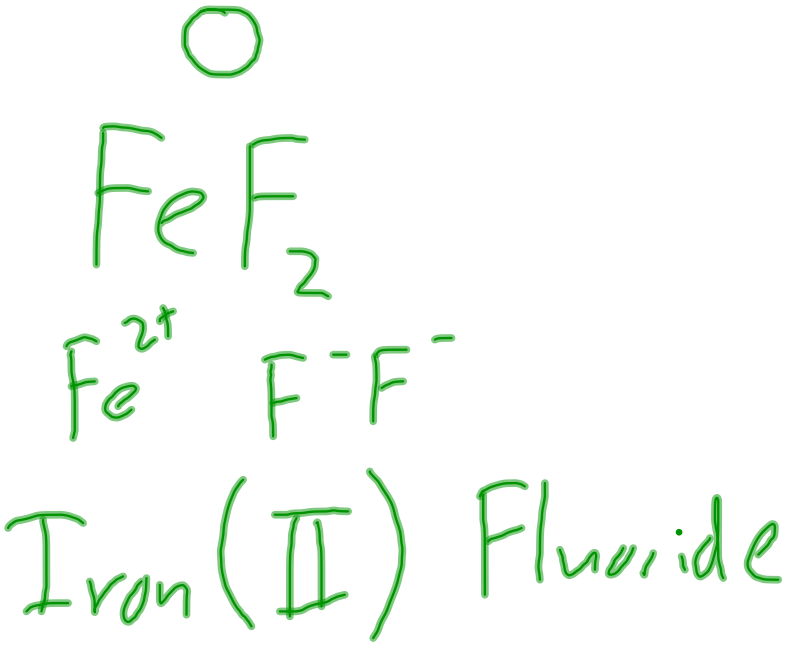
2+ 3+ 3+ / 2+ 2+ 2+ 6−

Fe 3+ 2+

Iron Fluoride

Fe^{2+}, Fe^{3+} F^-

FeF_2


FeF2
Fe2+ F- F-
Iron (II) Fluoride

Write the chemical formula of the following ionic compounds:

Fe^{2+} O^{2-}

(a) iron (II) oxide FeO

(b) lead (IV) chloride Pb^{4+} $Cl^- Cl^- Cl^- Cl^-$ $PbCl_4$

Write the name of the following ionic compounds:

Fe^{3+} O^{2-}

(a) Fe_2O_3 iron (III) oxide

(b) PbO Pb^{2+} O^{2-} lead (II) oxide

Homework

p.195 #7-10

Ionic Compounds Sheet