

• ionic bonding involves a
metal and a nonmetal

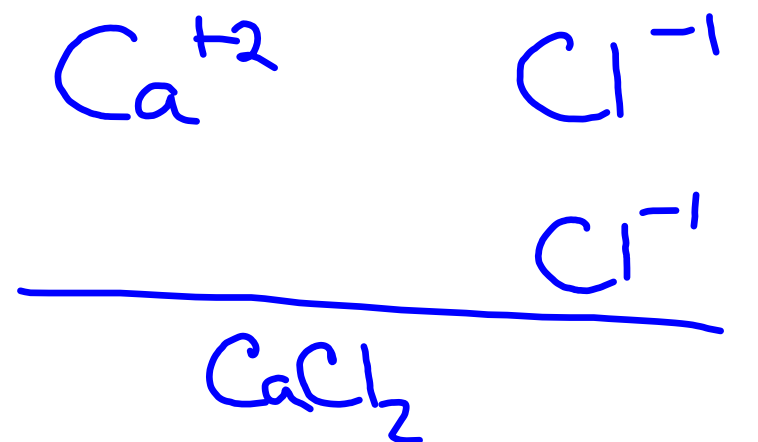
+

-

transferring e^- s
(salts)



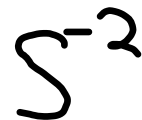
Sodium chloride



Calcium chloride



aluminum chloride



$$-16 \quad -6 = 0$$



aluminum sulfide

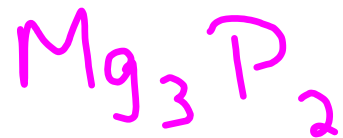


magnesium oxide

1. $p^{35} e^{36} n^{45}$

2 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 3d^{10} 4p^3$

$[Ar] 4s^2 3d^{10} 4p^3$



The block just
drawn are all the
metals that can have
more than 1 charge

Each metal in that
block is named with a
Roman numeral that =
the charge on the metal

(1) $(v1)$

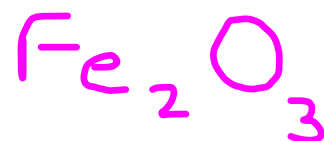
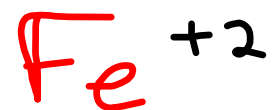
(11)

(111)

$(1v)$

(v)

iron (II) oxide



iron (III) oxide

lead(IV) nitride

Pb^{+4}

N^{-3}

Pb^{+4}

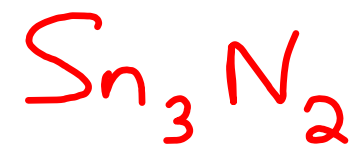
N^{-3}

Pb^{+4}

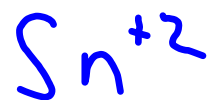
N^{-3}

N^{-3}

Pb_3N_4



tin (II) nitride





Copper (I) oxide



Polyatomic - more than
one atom in the charged
group.

NH_4^+ ammonium

OH^- hydroxide

CN^- cyanide

NO_3^- nitrate

ClO_3^- chlorate

BrO_3^- bromate

IO_3^- iodate

HCO_3^- bicarbonate

HSO_4^- bisulfate

CO_3^{2-} carbonate

SO_4^{2-} sulfate

PO_4^{3-} phosphate

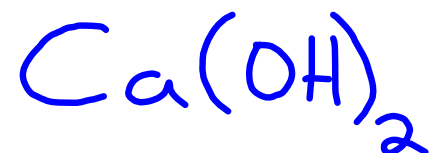
$\text{C}_2\text{H}_3\text{O}_2^-$ acetate



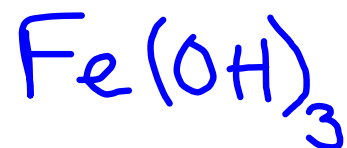
potassium sulfate

Barium Phosphate

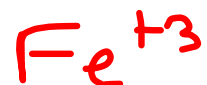




calcium hydroxide



iron(III) hydroxide

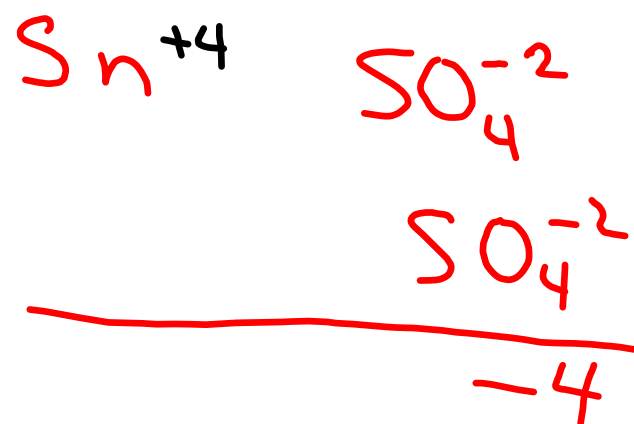


P 118 4.11 4.13

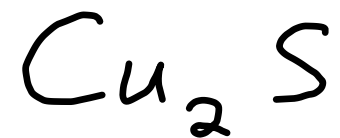
P 122 4.21 4.23



tin (IV) sulfate

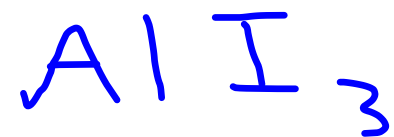
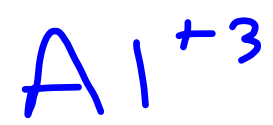


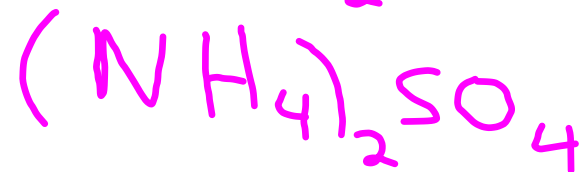
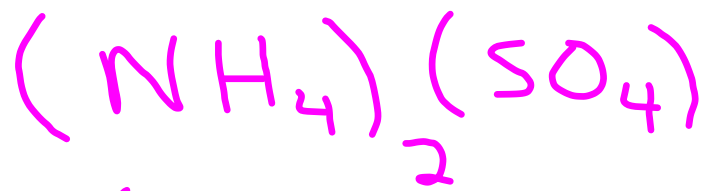
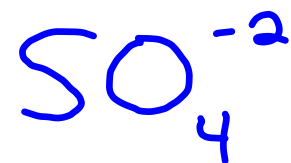
Homework: p127 4.31
p 128 4.33, 4.35
p134 4.39, 4.41, 4.37



Copper (I) Sulfide







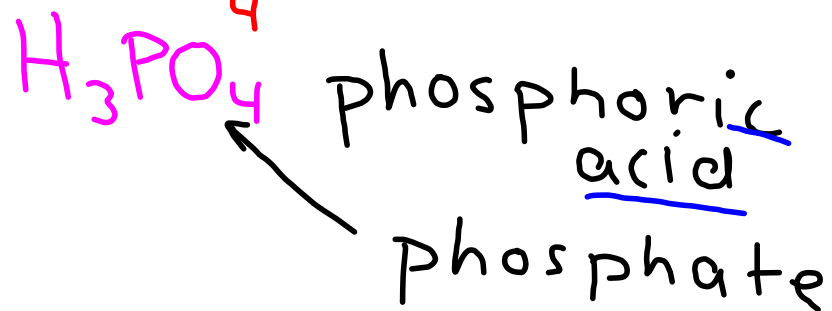
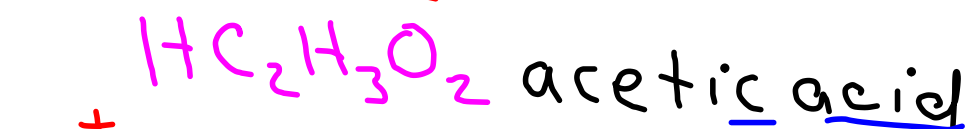
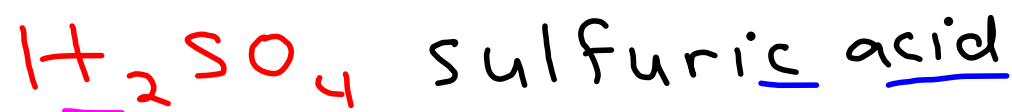
Acids - H^+ ion

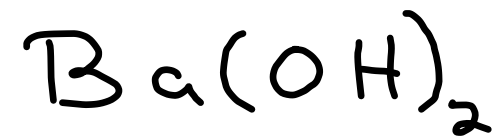
Bases - OH^- ion

Binary acid - two elements and only two with one being an H^+ and the other being a halogen.

HF hydrofluoric acid
 HCl hydrochloric acid
 HI hydroiodic acid
 HBr hydrobromic acid

polyatomic ions forming
acids





barium hydroxide

Covalent- 2 nonmetal
right side of periodic
table. They share e^- s

CO carbon monoxide

CO_2 carbon dioxide

NO nitrogen monoxide

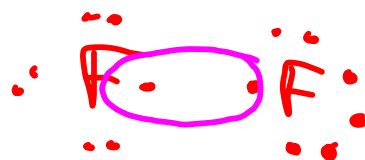
P_2O_5 di phosphorus v oxide
penta

Diatomic atoms

O_2 oxygen

N_2 nitrogen

F_2 fluorine



Cl_2 chlorine

Br_2 bromine

I_2 iodine

H_2 hydrogen

Quiz Monday

① #5, #6

② naming or give formula
5 cmpds