Type I Binary Ionic Compounds

$SrCl_2$

Sr^{2+} Cl^- Cl^-

strontium chloride

aluminum sulfide

Al^{3+} S^{2-}

Type II Binary Ionic Compounds

Multivalent ion - some atoms (transition elements) can form more than one ion, each with its own particular charge.
Ex. Fe^{2+} and Fe^{3+}

Ex. Name to Formula:

iron (III) oxide

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

Fe_2O_3

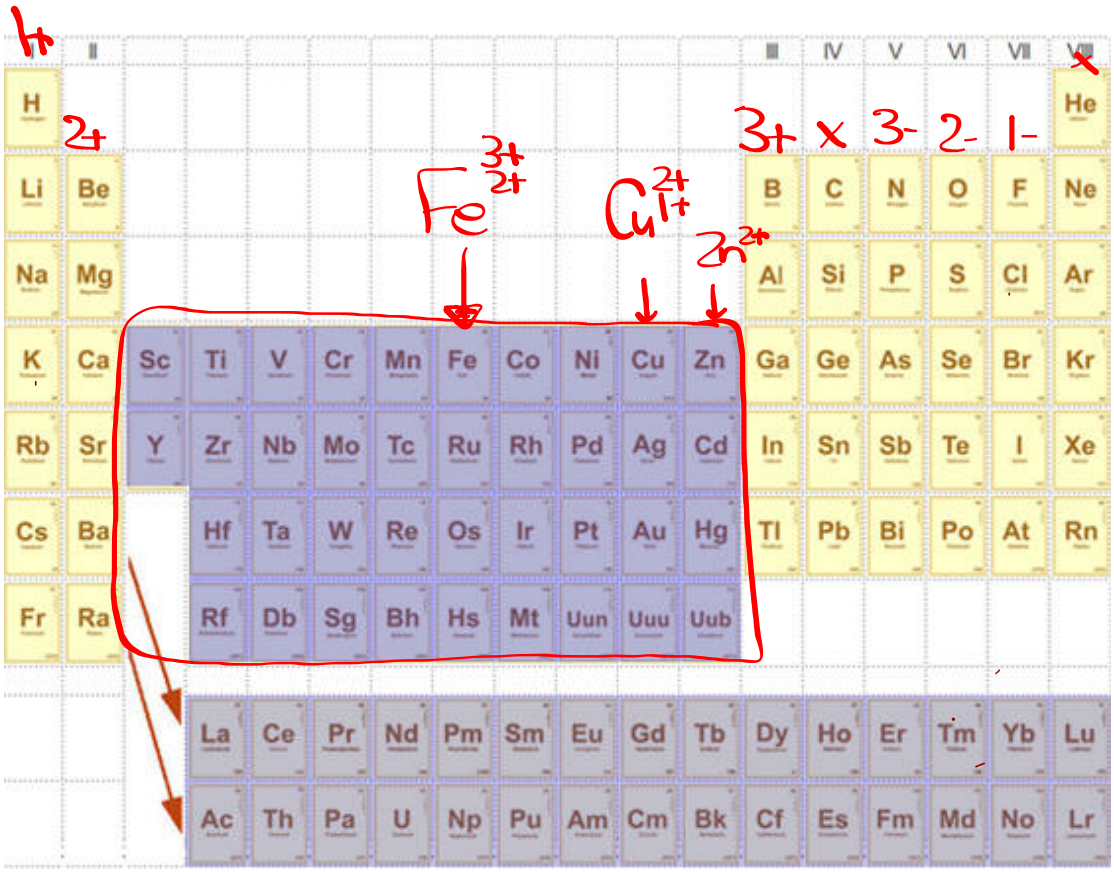
Cu^{2+} Cu^{1+}

Formula to Name :

CuF_2

Cu^{2+} F^-
F^-

Copper (II) fluoride


H+
2+
3+ x 3- 2- 1-
Fe 3+ 2+
Cu 2+ 1+
Zn 2+
H
He
Li Be B C N O F Ne
Na Mg Al Si P S Cl Ar
K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr
Rb Sr Y Zr Nb Mo Tc Ru Rh Pd Ag Cd In Sn Sb Te I Xe
Cs Ba Hf Ta W Re Os Ir Pt Au Hg Tl Pb Bi Po At Rn
Fr Ra Rf Db Sg Bh Hs Mt Uun Uuu Uub
La Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Tm Yb Lu
Ac Th Pa U Np Pu Am Cm Bk Cf Es Fm Md No Lr

Write the chemical formula or name for the following ionic compounds:

a) iron (II) chloride

Fe^{2+} Cl^- Cl^-

$FeCl_2$

b) tin (II) oxide

Sn^{2+} O^{2-}

SnO

c) PbO_2

Pb^{4+} O^{2-} O^{2-}

lead(IV)oxide

d) Co_3P_2

Co^{2+} Co^{2+} Co^{2+} P^{3-} P^{3-}

cobalt(II)phosphide

In-Class Assignment

Binary Ionic Compounds Type II

Worksheet