Fe P 3 H_2O

- Review symbols & formulas
- Coefficients and subscripts
- counting atoms
- hand in worksheet - Counting atoms
- Information on elements in atmosphere
- Names and formulas for compounds

$3H_2O$ H 2×3=6
O 1×3= 3

Feb 11-9:07 AM

$MgCl_2$
Mg 1 atom
Cl 2 atoms
3 atoms

$4H_2O$ H 2×4= 8
O 1×4= 4
12 atoms

$3Ca(OH)_2$
Ca 1×3 = 3
O 1×2×3 = 6
H 1×2×3 = 6
15 atoms

Dec 12-10:43 AM

Pg 58-59 1-4

1. Symbols are used & recognized in all languages.
Fe iron, fer, ferro
2.) a) Ca b) Fe c) Cl d) P e) Cu
3. a) H_2 b) C_3H_8
4. $NaHCO_3$ 4 element 6 atoms
$CaCO_3$ 3 elements 5 atoms
$C_9H_8O_4$ 3 elements 21 atoms
$C_2H_4O_2$ 3 elements 8 atoms

Feb 12-10:45 AM

Atoms, Molecules & the Atmosphere

N_2 - nitrogen gas makes up approx 78-80% of the atmosphere. Not very reactive, safe to breathe.

O_2- oxygen gas is about 21 % of the atmosphere (air we breathe). Required by almost all organisms for survival.

O_3 - ozone is in the upper layer of the atmosphere, it absorbs Ultraviolet radiation. CFC's have caused damage to the ozone layer, allowing more UV radiation to reach the earth.

Ar - Argon is stable and does not combine with other elements to form molecules or compounds. It is also found in the atmosphere with other gases at about 0.94%

CO_2- carbon dioxide gas is necessary for life as well and found in the atmosphere at about 0.03%

http://co2now.org/current-co2/co2-now/

CO - carbon monoxide gas - it is a poisonous gas produced when there is too little oxygen during combustion. IF humans get exposed to CO the molecules enter the lungs and the red blood cells treat CO as if it were O_2, the cells then carry CO through out the body instead of O_2, starving the cells of required O_2 and can result in DEATH.

Dec 12-9:47 AM

Periodic table

Metals GREEN background

Non-metals H, orange & blue

metalloids purple

Feb 17-10:29 AM

2.10 Names and Formulas for ionic compounds

Rules
1. Metals combine with non-metals in many compounds
2. Write the name of the metal first and the nonmetal second
3. Change the ending of the nonmetal to **'ide'**
4. Each atom has its own combining capacity.
5. Atoms combine so that each can fill its combining capacity.

Salt

Na (metal, sodium) Cl (non-metal, chlorine)

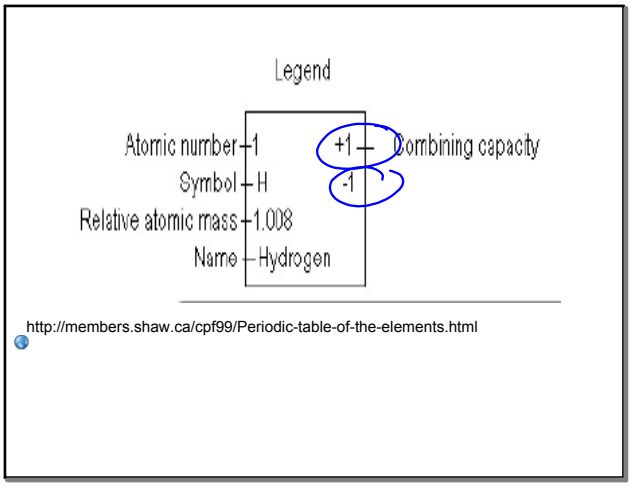
sodium chloride

P65 Q 3

1+ 1- Na Cl NaCl

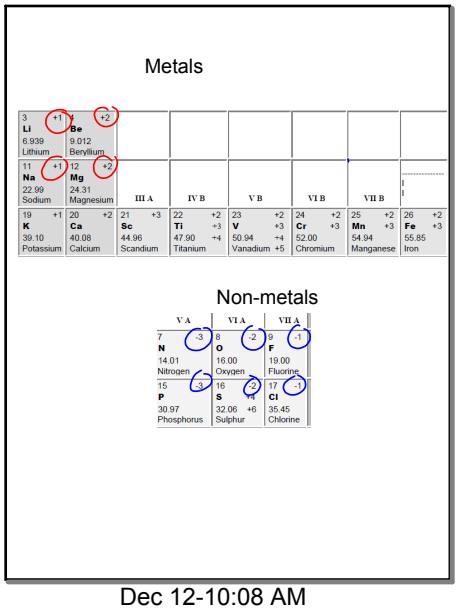
Na_2O +1+1 -2 = 0 the cross

Feb 17-10:28 AM



http://members.shaw.ca/cpf99/Periodic-table-of-the-elements.html

Feb 12-11:19 AM



Dec 12-10:08 AM

Review

1. Where do you find metals, non-metals on periodic table?

Green outline/background \ right rectangle center purple/blue orange

2.How do you write IONIC compound names?

ex **BeO** Beryllium oxide

3. What is the combining capacity for the following elements & are they metals or nonmetals :

a) Sr metal +2

b) Hg metal +1, +2

b) Ne nonmetal 0

d) S non metal -2, +4, +6

Dec 15-10:17 AM

Criss Cross Rule - write the combining capacity number above each element in the compound

If the combining capacity numbers are the same - Don't Cross

ex $Mg^{+2} O^{-2}$ = formula MgO

name magnesium oxide

If the combining capacities numbers are different - CRISS CROSS

ex $Mg^{+2} Cl^{-1}$ = formula $MgCl_2$

name magnesium chloride

Dec 12-10:10 AM

$Be^{+2} F^{-1}_2$ BeF_2

Beryllium fluoride

$Sr^{+2}_3 P^{-3}_2$ Sr_3P_2

strontium phosphide

$Al^{+3} N^{-3}$ AlN

aluminum nitride

Dec 15-11:02 AM

Draw structural diagrams of compounds - the combining capacity gives the number of connections- comes from the number of electrons that can be transferred in a chemical reaction.

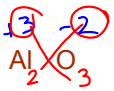
+2 -2
Mg O
MgO

+2 -1
Mg Cl_2
$MgCl_2$

Dec 15-9:57 AM

Aluminum + oxygen

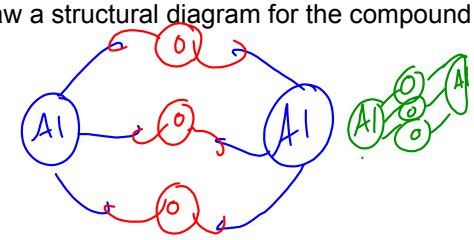
1. Write in the combining capacity above each element



2. Write the formula and the compound name

Al_2O_3 aluminum oxide

3. Draw a structural diagram for the compound



Dec 15-10:00 AM

lithium + phosphorus

1. Write in the combining capacity above each element

2. Write the formula and the compound name

3. Draw a structural diagram for the compound

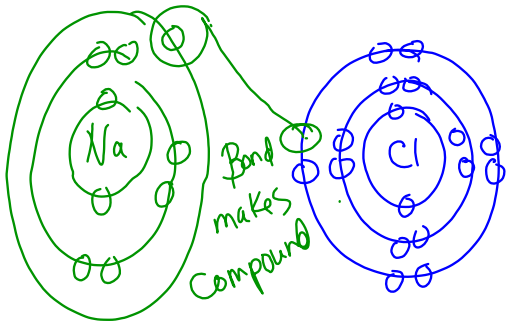
Dec 15-10:00 AM

Page 65

question 4

Feb 13-1:01 PM

Dec 15-11:24 AM

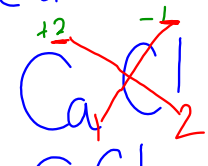


May 26-2:40 PM

Calcium joining Chlorine

Compound name Calcium chloride

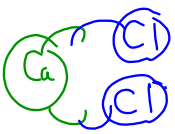
Criss Cross



Combining capacity

$CaCl_2$

Al + O



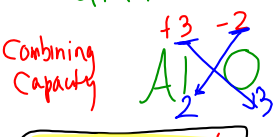
Feb 12-1:23 PM

Aluminum and oxygen

M NM

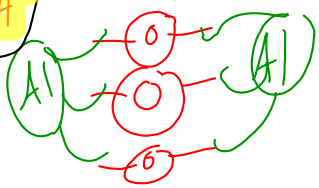
aluminum oxide name

Combining Capacity

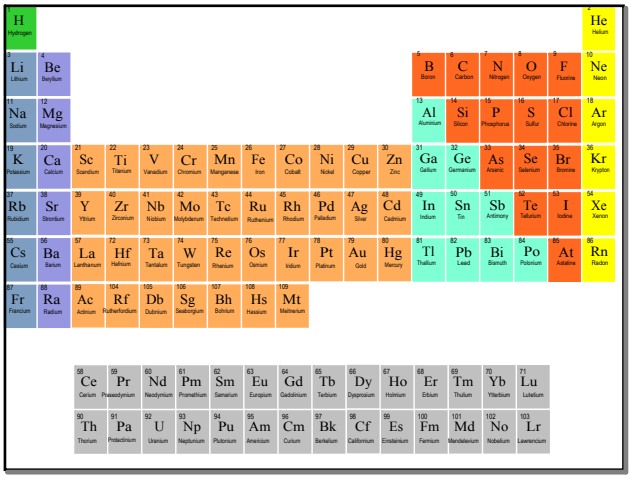


formula Al_2O_3

P 64 Q 1-4



Feb 12-1:29 PM



Periodic table

Review - where do you find metals, non-metals on periodic table?

How do you write IONIC compound names?

How do you figure out the chemical formula of IONIC compounds?

Feb 13-9:05 AM

pg 65 1-5

1. Combining capacity is the ability of elements to combine with other elements.

2. In compounds the nonmetals change their name

ex sodium chloride

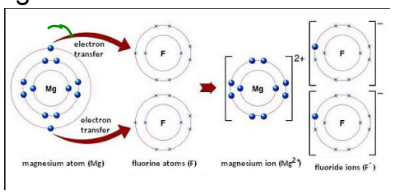
3. a) CaCl2 - calcium chloride
b) CaO calcium oxide
c) CuCl - Copper chloride
d) KI - potassium iodide
e) AgCl - silver chloride

Feb 17-1:23 PM

Sodium fluoride

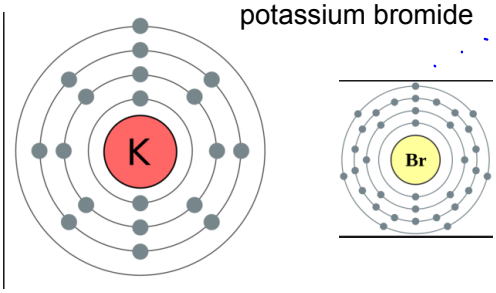
http://en.wikipedia.org/wiki/Redox

Magnesium fluoride



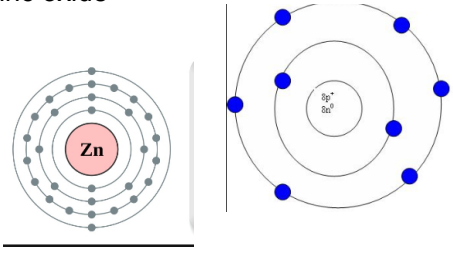
Feb 13-1:01 PM

potassium bromide



May 27-1:59 PM

zinc oxide

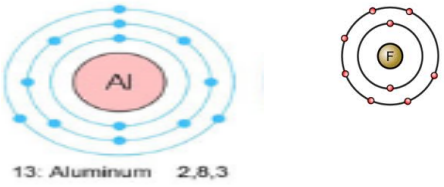


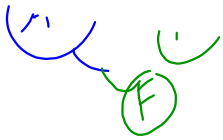
May 27-2:00 PM

Silver oxide

May 27-2:06 PM

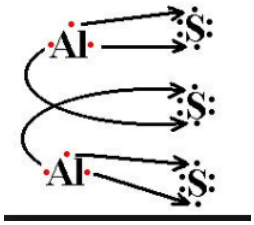
Aluminum fluoride

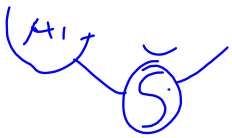




May 27-2:08 PM

Aluminum sulfide



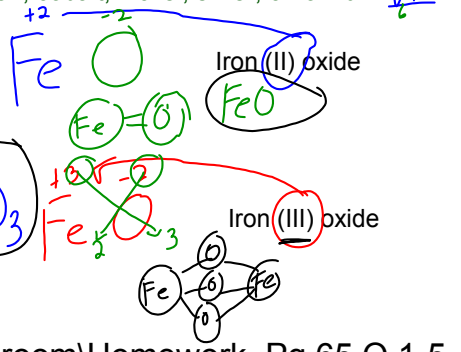


May 27-2:10 PM

Metals with two different combining capacities use ***roman numerals in the compound name*** to indicate which combining capacity is used.

Roman numerals - I, II, III, IV, V, VI

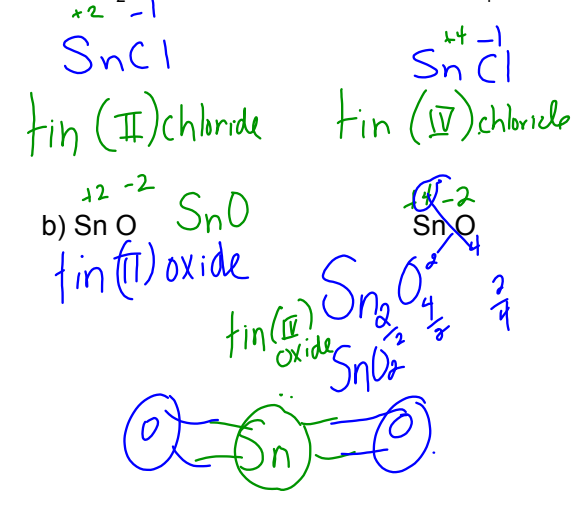
ex. iron, cobalt, nickel, silver, chromium



Classroom\Homework Pg 65 Q 1-5

Feb 17-11:19 AM

5. a $SnCl_2$ $SnCl_4$



Dec 15-10:11 AM

Assignment

Combining capacity + formula Sheet

Dec 16-11:13 AM

zinc	iron (II)	iron (III)	gallium	silver	lead (IV)
$ZnCl_2$					

May 27-2:56 PM

Write chemical formulas for the compounds in each box. The names are found by finding the intersection between the cations and anions. Example: The first box is the intersection between the "zinc" cation and the "chloride" anion, so you should write "$ZnCl_2$", as shown.

	zinc	iron (II)	iron (III)	gallium	silver	lead (IV)
chloride	$ZnCl_2$					
Sulfide						
phoshphide						
Oxide						
Nitride						
iodide						

May 27-2:58 PM

	zinc	iron (II)	iron (III)	gallium	silver	lead (IV)
chloride	$ZnCl_2$	$FeCl_2$	$FeCl_3$	$GaCl_3$	$AgCl$	$PbCl_4$
Sulfide	ZnS	FeS	Fe_2S_3	Ga_2S_3	Ag_2S	PbS_2
phosphide	Zn_3P_2	Fe_3P_2	FeP	GaP	Ag_3P	Pb_3P_4
Oxide	ZnO	FeO	Fe_3O_2	Ga_2O_3	Ag_2O	PbO_2
Nitride	Zn_3N_2	Fe_3N_2	FeN	GaN	Ag_3N	Pb_3N_4
iodide	ZnI_2	FeI_2	FeI_3	GaI_3	AgI	PbI_4

Pb_2S_4

Pb_2O_4

May 29-9:20 AM

Assign BLM 5.8 from Chemistry

Go to Family groups 11

May 28-2:09 PM

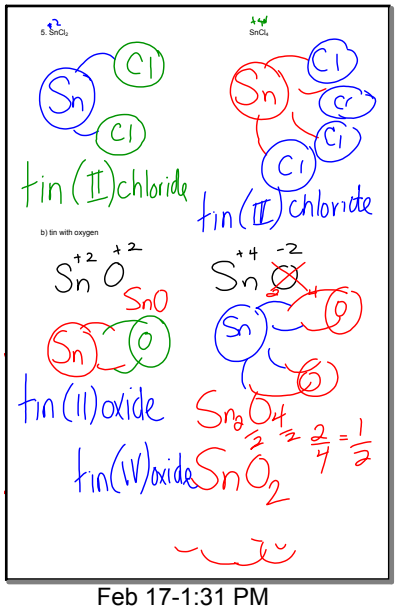
May 27-2:13 PM

May 27-1:56 PM

f) aluminum telluride

g) aluminum sulfide

Feb 17-1:30 PM



Feb 17-1:31 PM

Quiz -
if you missed it, TODAY IS YOUR LAST CHANCE OR RECEIVE A MARK OF ZERO

test tomorrow

Sep 19-10:40 AM

Test Thursday

Complete combining capacity worksheet
Complete the Ionic Compounds worksheet

Chap 2
P 76-77
Q4,5,10,11, 13

Study all notes, questions covered to date for the test Thursday

2.1 particle theory -
pure substance
solution (homogenous mixture
heterogeneous mixture
element
atom
compound
molecules

2.7 Chemical symbols & Formulas
Symbols
formulas
counting atoms

2.8 Atoms & molecules in atmosphere
N_2, Ar, O_2, O_3, CO_2, CO

2.10 Names and formulas
How to write the formula
how to write the name
How to draw a structural diagram

Sep 20-2:51 PM

2. i) $CuCl_2$

Copper (II) chloride

Dec 17-12:42 PM

1. i) CuS

2. a) lithium oxide

& roman numeral

i) $CuCl_2$ Copper (II) chloride

Dec 17-10:45 AM

Test Wednesday

Complete combining capacity worksheet

Review questions
P 40-41 Chap 1
Q 4, 6,7,12,13

P 76-77 Chap 2
Q4,5,10,11, 13

Study all notes, questions covered to date for the test Wednesday

Sep 20-2:51 PM

P 76-77 Chap 2
Q4,5,10,11, 13

Feb 18-1:26 PM

Feb 18-1:15 PM

Feb 18-1:14 PM

Ag_2S -> Silver sulfide
$ZnBr_2$ Zinc bromide
Na_2O sodium oxide
MgS -> Magnesium sulfide
CaI_2 Calcium iodide
11. K^{+1} Cl^{-1} KCl formula

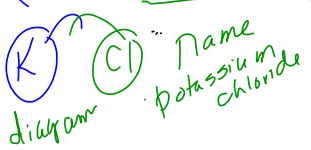


diagram name potassium chloride

Feb 18-9:29 AM

Ca + O
+2 -2
CaO CaO formula

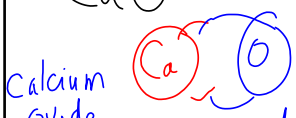
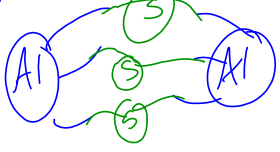
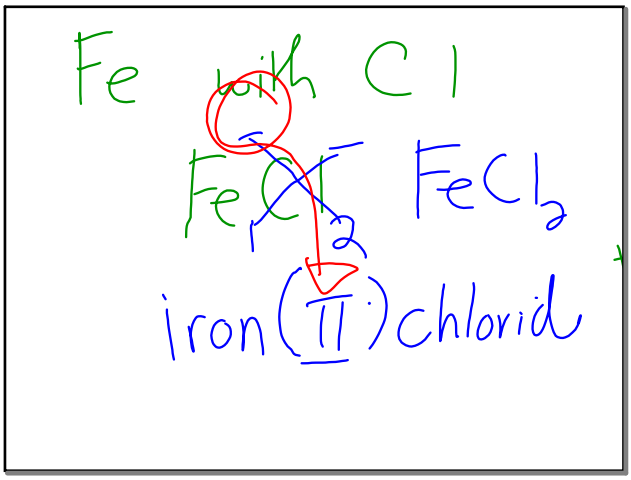


diagram
Calcium oxide.

Al^{3} S^{-2} formula Al_2S_3
Al_2S_3 aluminium sulfide



Feb 18-11:33 AM



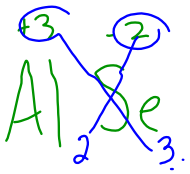
Feb 18-11:37 AM

Test Tuesday

Complete combining capacity worksheet

Review questions
P 40-41 Chap 1
Q 4,5, 6,7,13

P 76-77 Chap 2
Q 4,10,11, 13



Study all notes, questions covered to date for the test tomorrow

Sep 20-2:51 PM

After the test

read pages 87-89

Complete questions 2 & 3

Read pages 92-93

Complete questions 2, 4,5

Feb 19-11:07 AM