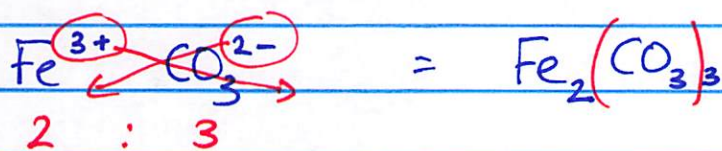


9/21/2018

name \rightarrow formula

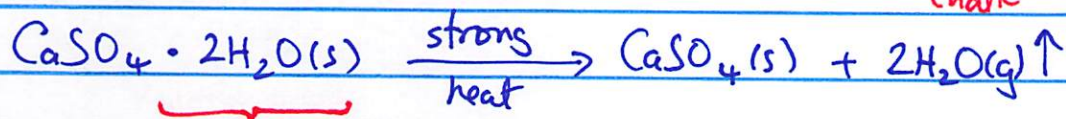
iron(III) carbonate



Hydrated ionic cpds

hydrates are ionic cpds w/ associated H_2O molecules.

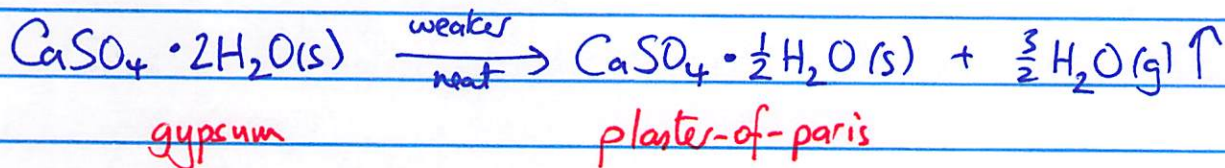
ex: $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ (gypsum \sim plaster / sheetrock / 'chalk')



waters of
hydration

hydrates

anhydrate



Naming them:

- (1) Name ionic cpd
- (2) Write a prefix indicating # waters
- (3) Write 'hydrate'

#	$\frac{1}{2}$	1	2	3	4	5	6
prefix	hemi	mono	di	tri	tetra	penta	hexa

#	7	8	9	10
prefix	hepta	octa	nona	deca

ex: $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
 calcium sulfate dihydrate

$\text{CuCO}_3 \cdot 8\text{H}_2\text{O}$
 $\downarrow \quad \downarrow$
 $\text{Cu}^{2+} \quad \text{CO}_3^{2-}$
 copper(II) carbonate octahydrate

Molecular cpds formulas + names.

- 2 x non-met elements!

ex: N_2O , N_2O_5 , NO , NO_2 , CF_4 , PCl_3

Some have common names: ex: H_2O = water

NH_3 = ammonia

CH_4 = methane

Use a systematic approach to naming!

Name:

prefix

 -

name of 1 st element

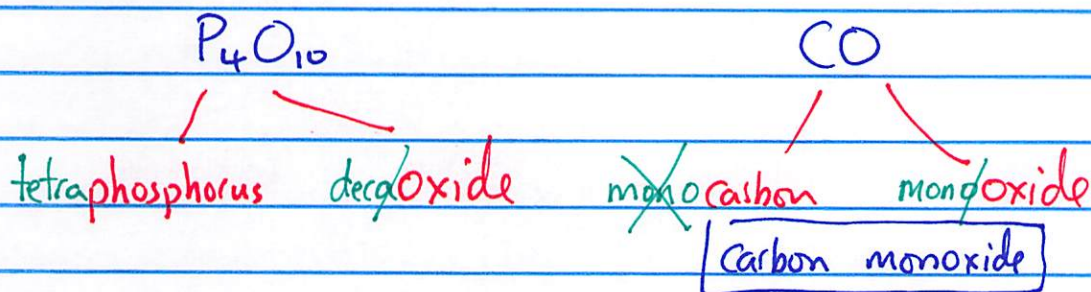
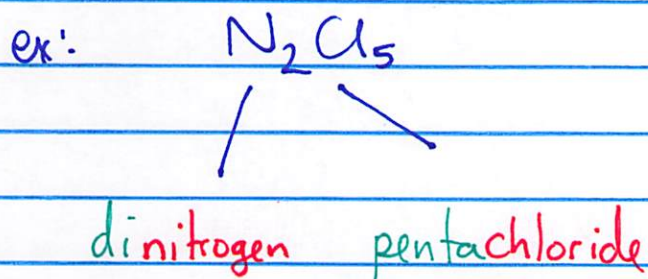
 -

prefix

 -

base name of 2 nd element + -ide
--

- omit prefix mono for 1st element
- omit last letter of prefix if there are 2 vowels in a row which sound gross.



Acid names + formulas

↳ dissolve in H_2O , form H^+ ion, taste sour, dissolve metals...

$HF(aq)$ = hydrofluoric acid

$HCl(aq)$ = hydrochloric acid

$HNO_3(aq)$ = nitric acid

$H_2SO_4(aq)$ = sulfuric acid

$H_3PO_4(aq)$ = phosphoric acid.

↑
dissolved in water

Exam 1: Over ch 1+2
(not 3)