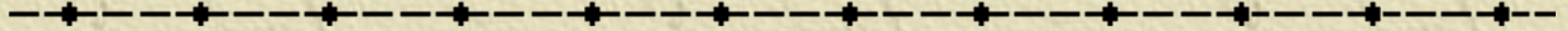


Identifying compounds as ionic, covalent, or acids from their formula

Because we use different systems to name ionic, covalent, or acid compounds from their formulas, the first thing you must be able to do, is to look at a formula and identify which of these three classes your compound belongs to.

Ionic Compounds

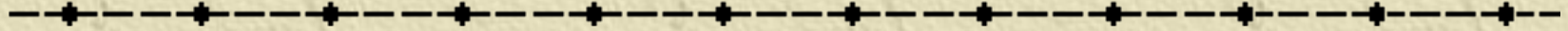


Combination of a metal and a non-metal

Metals – Left half and center of periodic table

Non-metals – Upper right of periodic table

Ionic Compounds



										Non-metals										
1A																		8A		
H	2A											3A	4A	5A	6A	7A	He			
Li	Be											B	C	N	O	F	Ne			
Na	Mg			TransitionMetals								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	La*	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn			
Fr	Ra	Ac*	Unq	Unp	Unh	Uns	Uno	Une	Uun	Uuu										
		Lathanides*	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu				
		Actinides**	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr				

Metals

Ionic Compounds

The **metal** will always be the **first** element in the name

The **non metal** will always be the **last** element in the name

Examples:



Metal

Na

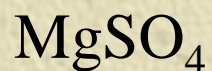
Non-metals

Cl



Ca

O



Mg

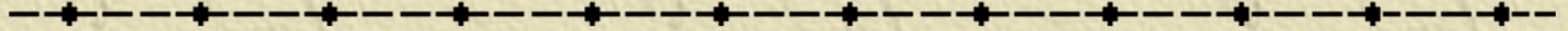
S and O



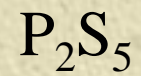
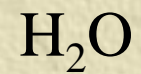
K and Mn

O

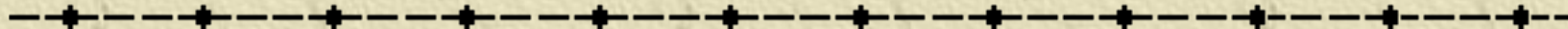
Covalent Compounds



Examples:

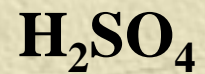


Acids



First element is **H**

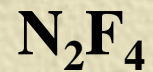
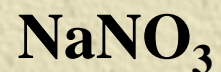
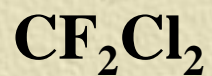
Examples



Only exception – water – H_2O

Quiz

Classify the following compounds as ionic, covalent, or acids



Quiz-Answers

PtO₂	Ionic	Metal (Pt) and nonmetal (O)
CF₂Cl₂	Covalent	All non metals
HClO₄	Acid	H is first element
NaNO₃	Ionic	Metal (Na) and nonmetals (N,O)
Sr(OH)₂	Ionic	Metal (Sr) and nonmetals (O,H)
N₂F₄	Covalent	All non metals
HBr	Acid	H is first element