

# Scientifictutor.org

## Compounds and Bonding worksheet **WITH ANSWERS**

Tell whether each compound is ionic or covalently bonded:

NaBr **ionic**                      CF<sub>4</sub> **covalent**

CO<sub>2</sub> **covalent**                      Fe<sub>2</sub>S<sub>3</sub> **ionic**

I<sub>2</sub> **covalent**                      Li<sub>2</sub>Se **ionic**

NH<sub>3</sub> **covalent**                      CaO **ionic**

AlCl<sub>3</sub> **ionic**                      Ba<sub>3</sub>N<sub>2</sub> **ionic**

SiBr<sub>4</sub> **covalent**                      CrP **ionic**

RbF **ionic**                      AuI **ionic**

TeF<sub>2</sub> **covalent**                      As<sub>2</sub>C<sub>3</sub> **covalent**

Give the ion for each element.

Ca **+2**                      F **-1**                      N **-3**                      I **-1**

Be **+2**                      P **-3**                      S **-2**                      Al **+3**

Fr **+1**                      Br **-1**                      Ba **+2**                      As **-3**

Put the two elements together to form an ionic compound.

K and Cl **KCl**                      Na and P **Na<sub>3</sub>P**

Sr and O **SrO**                      Be and I **BeI<sub>2</sub>**

Li and Si **Li<sub>4</sub>Si**                      Al and S **Al<sub>2</sub>S<sub>3</sub>**

Ca and P **Ca<sub>3</sub>P<sub>2</sub>**                      Ba and F **BaF<sub>2</sub>**

Cs and N **Cs<sub>3</sub>N**                      Ra and C **Ra<sub>2</sub>C**

Tell me which chemicals below are atoms, molecules, or compounds. More than one name may apply to each.

Ne	Atom or Molecule
O <sub>2</sub>	Molecule
KBr	Compound or Molecule
H <sub>3</sub> PO <sub>4</sub>	Compound or Molecule
C <sub>4</sub>	Molecule
Kr	Atom or Molecule

How many atoms of each element are in the compounds or molecules below.

GeS <sub>2</sub>	Ge = 1	S = 2	
Cl <sub>2</sub>	Cl = 2		
Rb <sub>2</sub> CO <sub>3</sub>	Rb = 2	C = 1	O = 3
(VP <sub>2</sub> ) <sub>3</sub> F <sub>2</sub>	V = 3	P = 6	F = 2
(NH <sub>4</sub> ) <sub>3</sub> As	N = 3	H = 12	As = 1
Zn <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	Zn = 3	P = 2	O = 8

Calculate the molar mass of these compounds below. Rounding is okay.

XeF <sub>4</sub>	207 g / mol
Al <sub>2</sub> S <sub>3</sub>	150 g / mol
Mg(OH) <sub>2</sub>	58.3 g / mol
PbSe <sub>2</sub>	365 g / mol
Ca <sub>3</sub> (SO <sub>3</sub> ) <sub>2</sub>	280 g / mol
B(IO <sub>3</sub> ) <sub>3</sub>	536 g / mol