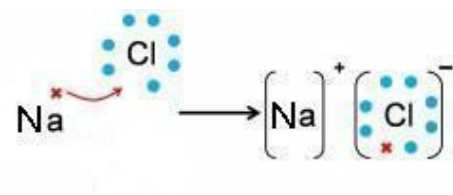


Name: _____

Ionic Compounds: Names and Formulas SNC2D

Sodium chloride or NaCl contains 1 sodium ion and 1 chloride ion.



However, different ions may form compounds in different ratios.

For example, calcium chloride or CaCl₂ contains 1 calcium ion and 2 chloride ions.

(Subscripts are added to the symbols in a formula if there is more than one of that type of atom.)

Counting Ions: Practice

FeCl₃ contains _____

Na₂O contains _____

CaO contains _____

Fe₂O₃ contains _____

NaClO₃ contains _____

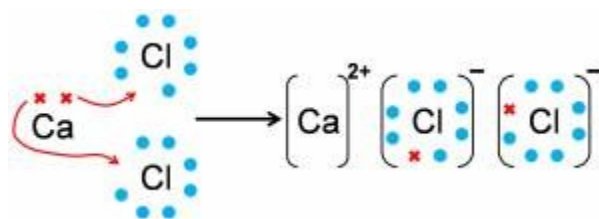
Na₂CO₃ contains _____

Ca(ClO₃)₂ contains _____

Note that when there is more than one polyatomic ion, the ion is placed in brackets and the subscripts are written outside the brackets.

Why these ratios? It is the valence electrons that determine how these ions combine.

For example, calcium had 2 valence electrons to lose and each chlorine only wants 1. So calcium has to find 2 chlorines.



Use diagrams to determine how the following combine to form compounds:

Mg^{2+} and Br^{1-}	Li^{1+} and P^{3-}
Ca^{2+} and O^{2-}	Al^{3+} and OH^{1-}
K^{1+} and SO_4^{2-}	Al^{3+} and O^{2-}

Notice that the quick method of determining the formula is to _____:

But the ratio between the ions must be reduced to lowest terms (and 1s are not written).

E.g. Pb^{4+} and O^{2-} becomes _____ *not* _____