

### Completion

Complete each sentence or statement.

12. An electron that occupies the outermost energy level of an atom is known as a(n) Valence electron.
13. An atom or group of atoms that has an electrical charge because it has either lost or gained one or more electrons is a(n) ion.
14. An ion that has a negative charge is a(n) anion.
15. The ion formed by an atom of a metal is a(n) cation.
16. The ion formed by an atom of a nonmetal element is a(n) anion.
17. A compound resulting from the formation of an ionic bond between a cation and an anion is a(n) salt.
18. A repetitive geometric arrangement of ions, atoms, or molecules that forms a crystal structure is called the crystal lattice.
19. The name of the ion  $O^{2-}$  is the oxide ion.
20. The name of the ion  $Cu^+$  is the copper(I) ion.
21. The chemical formula for the compound strontium sulfide, which contains  $Sr^{2+}$  and  $S^{2-}$  ions, is  $SrS$ .

Word Bank:

Valence ion	Crystal lattice Salt	Cation Oxide	Anion Anion	Copper(I) SrS
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Write the formula for the following ionic compounds:

1. Sodium chloride:  $NaCl$
2. Calcium oxide:  $CaO$
3. Iron (II) fluoride:  $FeF_2$
4. Copper (I) oxide:  $Cu_2O$
5. Aluminum sulfate:  $Al_2(SO_4)_3$
6. Silver chloride:  $AgCl$
7. Potassium carbonate:  $K_2CO_3$
8. Tin (IV) fluoride:  $SnF_4$
9. Chromium (III) oxide:  $Cr_2O_3$
10. Sodium sulfide:  $Na_2S$

Write the names for the following ionic compounds:

1.  $NaNO_3$  Sodium Nitrate
2.  $Li_2O$  lithium oxide
3.  $CuCO_3$  Copper(II) carbonate
4.  $Fe_2O_3$  Iron(III) oxide
5.  $Ca_3(PO_4)_2$  calcium phosphate
6.  $SnO$  tin(II) oxide
7.  $MgCO_3$  magnesium carbonate
8.  $MnCO_3$  manganese(II) carbonate
9.  $Ag_2O$  silver oxide
10.  $TiCl_3$  titanium(III) chloride