**Minerals (ionic compounds)**  Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Honors Chemistry Period: 1 2 3 4 5 6 7

**Circle the polyatomic ions in the list below:**

|  |  |  |
| --- | --- | --- |
| acetatealuminumammoniumcarbonatechloratechloridechloritechromate | hydroxideiron(II)iron(III)silicatemercury(I)nitridenitriteoxalate | oxideperchloratepermanganatephosphaterubidiumsodiumsulfatesulfite |

Most metallic elements occur naturally as minerals. Listed below are the common names of some simple minerals and their chemical formulas. Complete the table below by identifying the positive and negative ions in the formulas (hint: the cations are single metals, use the charge on the anions to figure out the charge on the cations):

**Formulas for Selected Minerals**

|  |  |  |  |
| --- | --- | --- | --- |
| **Mineral** | **Formula** | **Positive Ion** | **Negative Ion** |
| a. anhydrite (related to gypsum) | CaSO4 | Ca2+ | SO42- |
| b. barite | BaSO4 |  |  |
| c. calcite (limestone, marble) | CaCO3 |  |  |
| d. cassiterite | SnO2 |  |  |
| e. cinnabar | HgS |  |  |
| f. corundum (ruby, sapphire) | Al2O3 |  |  |
| g. crocoite | PbCrO4 |  |  |
| h. cuprite | Cu2O |  |  |
| i. fluorite (feldspar) | CaF2 |  |  |
| j. galena | PbS |  |  |
| k. halite | NaCl |  |  |
| l. hematite | Fe2O3 |  |  |
| m. molybdenite | MoS2 |  |  |
| n. potash | K2O |  |  |
| o. pyrite (fool’s gold) | FeS2 |  |  |
| p. rutile | TiO2 |  |  |
| q. saltpeter | KNO3 |  |  |
| r. smithsonite | ZnCO3 |  |  |
| s. sphalerite | ZnS |  |  |
| t. stibnite | Sb2S3 |  |  |
| u. wollastonite | CaSiO3 |  |  |