SNC 2D **Ionic Nomenclature Worksheet** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Name the following ions:

|  |  |  |  |
| --- | --- | --- | --- |
| Ion | Name | Ion | Name |
| Li+ |  | Cu2+ |  |
| S2- |  | O2- |  |
| F- |  | Mg2+ |  |
| Sn4+ |  | Co3+ |  |
| PO43- |  | NO3- |  |
| CO32- |  | SO42- |  |
| OH- |  | NH4+ |  |

2. Write the formula and name for the compound formed from the following ions:

|  |  |  |
| --- | --- | --- |
| Ions | Chemical Formula | Compound Name |
| NH4+ + F- |  |  |
| K+ + CO32- |  |  |
| Mg2+ + OH- |  |  |
| B3+ + NO3- |  |  |
| Ca2+ + SO42- |  |  |
| Al3+ + PO43- |  |  |
| Ba2+ + SO42- |  |  |
| Li+ + CO32- |  |  |
| H+ + PO43- |  |  |

3. Name the following compounds:

|  |  |  |  |
| --- | --- | --- | --- |
| Chemical Formula | Compound Name | Chemical Formula | Compound Name |
| FeO |  | Fe2O3 |  |
| CrCl2 |  | CuSO4 |  |
| Hg(NO3)2 |  | Fe3(PO4)2 |  |
| Cu(OH)2 |  | CoCl2 |  |

4. Determine the chemical formula of the following compounds and the individual ions that make up each compound.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Formula | Ions | Name | Formula | Ions |
| magnesium fluoride |  |  | copper (II) sulfate |  |  |
| calcium phosphate |  |  | tin (IV) oxide |  |  |
| calcium bromide |  |  | silver nitrate |  |  |
| sodium carbonate |  |  | chromium (III) phosphate |  |  |
| potassium hydroxide |  |  | iron (III) nitrate |  |  |
| aluminum chloride |  |  | lead (II) iodide |  |  |
| cesium fluoride |  |  | mercury (II) sulfate |  |  |
| lithium hydroxide |  |  | copper (II) chloride |  |  |
| ammonium sulfate |  |  | ammonium carbonate |  |  |
| beryllium iodide |  |  | potassium sulfide |  |  |
| lithium phosphate |  |  | magnesium nitrate |  |  |

5. For each of the following elements, indicate the total number of electrons it has, and the number of valence electrons it has:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Element | # electrons | # valence electrons | Element | # electrons | # valence electrons |
| carbon |  |  | nitrogen |  |  |
| argon |  |  | hydrogen |  |  |
| potassium |  |  | calcium |  |  |
| chlorine |  |  | aluminum |  |  |
| germanium |  |  | lithium |  |  |

6. Draw Lewis dot diagrams to show how bonding occurs between the following atoms: (use different coloured pencils for each atom in order to show where electrons moved)

|  |  |
| --- | --- |
| Atoms | Lewis Dot bonding diagram |
| calcium and oxygen |  |
| potassium and bromine |  |
| aluminum and chlorine |  |
| magnesium and iodine |  |
| lithium and oxygen |  |
| phosphorus and calcium |  |