1. Define ionic bonding: ______________________________________________________________________
   ______________________________________________________________________________________

2. Define covalent bonding: ______________________________________________________________________
   ______________________________________________________________________________________

3. Fill in the spaces below regarding the name and formula of ionic compounds. You may need to refer to a table of electrovalencies to assist you.

<table>
<thead>
<tr>
<th>Number</th>
<th>Compound</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sodium hydroxide</td>
<td>( \text{NaOH} )</td>
</tr>
<tr>
<td>2</td>
<td>Sodium chloride</td>
<td>( \text{NaCl} )</td>
</tr>
<tr>
<td>3</td>
<td>Calcium oxide</td>
<td>( \text{CaO} )</td>
</tr>
<tr>
<td>4</td>
<td>Calcium hydroxide</td>
<td>( \text{Ca(OH)}_2 )</td>
</tr>
<tr>
<td>5</td>
<td>Iron (III) sulfate</td>
<td>( \text{Fe}_2\text{O}_3 )</td>
</tr>
<tr>
<td>6</td>
<td>Potassium permanganate</td>
<td>( \text{K}_2\text{MnO}_4 )</td>
</tr>
<tr>
<td>7</td>
<td>Copper (II) hydroxide</td>
<td>( \text{Cu(OH)}_2 )</td>
</tr>
<tr>
<td>8</td>
<td>Ammonium sulfate</td>
<td>( \text{NH}_4\text{SO}_4 )</td>
</tr>
<tr>
<td>9</td>
<td>Nickel (II) bromide</td>
<td>( \text{NiBr}_2 )</td>
</tr>
<tr>
<td>10</td>
<td>Ammonium hydrogen sulfate</td>
<td>( \text{NH}_4\text{HSO}_4 )</td>
</tr>
<tr>
<td>11</td>
<td>Iron (III) oxide</td>
<td>( \text{Fe}_2\text{O}_3 )</td>
</tr>
<tr>
<td>12</td>
<td>Zinc hydroxide</td>
<td>( \text{Zn(OH)}_2 )</td>
</tr>
<tr>
<td>13</td>
<td>Sodium carbonate</td>
<td>( \text{Na}_2\text{CO}_3 )</td>
</tr>
<tr>
<td>14</td>
<td>Sodium phosphate</td>
<td>( \text{Na}_3\text{PO}_4 )</td>
</tr>
<tr>
<td>15</td>
<td>Copper (III) sulfate</td>
<td>( \text{Cu}_2\text{SO}_4 )</td>
</tr>
<tr>
<td>16</td>
<td>Aluminium hydroxide</td>
<td>( \text{Al(OH)}_3 )</td>
</tr>
<tr>
<td>17</td>
<td>KOH</td>
<td>( \text{KOH} )</td>
</tr>
<tr>
<td>18</td>
<td>HgOH</td>
<td>( \text{HgOH} )</td>
</tr>
<tr>
<td>19</td>
<td>FeCl₃</td>
<td>( \text{FeCl}_3 )</td>
</tr>
<tr>
<td>20</td>
<td>NH₄OH</td>
<td>( \text{NH}_4\text{OH} )</td>
</tr>
<tr>
<td>21</td>
<td>Cu₂O</td>
<td>( \text{Cu}_2\text{O} )</td>
</tr>
<tr>
<td>22</td>
<td>NaOH</td>
<td>( \text{NaOH} )</td>
</tr>
<tr>
<td>23</td>
<td>NH₄NO₃</td>
<td>( \text{NH}_4\text{NO}_3 )</td>
</tr>
<tr>
<td>24</td>
<td>NaHCO₃</td>
<td>( \text{NaHCO}_3 )</td>
</tr>
<tr>
<td>25</td>
<td>HgO</td>
<td>( \text{HgO} )</td>
</tr>
<tr>
<td>26</td>
<td>Ca(OH)₂</td>
<td>( \text{Ca(OH)}_2 )</td>
</tr>
<tr>
<td>27</td>
<td>CaCl₂</td>
<td>( \text{CaCl}_2 )</td>
</tr>
<tr>
<td>28</td>
<td>Fe₂O₃</td>
<td>( \text{Fe}_2\text{O}_3 )</td>
</tr>
<tr>
<td>29</td>
<td>NaCl</td>
<td>( \text{NaCl} )</td>
</tr>
</tbody>
</table>

Worksheet - Naming and writing ionic and covalent compounds
4. Write the formulas for the following compounds and state whether they are covalent or ionic:

<table>
<thead>
<tr>
<th>NAME</th>
<th>FORMULA</th>
<th>COVALENT or IONIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ammonium sulfate</td>
<td>(NH₄)₂SO₄</td>
<td>Covalent</td>
</tr>
<tr>
<td>hexaboron silicide</td>
<td>B₆H₁₂</td>
<td>Ionic</td>
</tr>
<tr>
<td>aluminum phosphate</td>
<td>Al₂O₃</td>
<td>Ionic</td>
</tr>
<tr>
<td>copper (II) bicarbonate</td>
<td>CuH₂CO₃</td>
<td>Ionic</td>
</tr>
<tr>
<td>iodine pentafluoride</td>
<td>I₂F₅</td>
<td>Ionic</td>
</tr>
<tr>
<td>dinitrogen trioxide</td>
<td>N₂O₃</td>
<td>Ionic</td>
</tr>
<tr>
<td>lead (IV) sulfite</td>
<td>PbSO₃</td>
<td>Ionic</td>
</tr>
<tr>
<td>phosphorus triiodide</td>
<td>P₃I₅</td>
<td>Ionic</td>
</tr>
</tbody>
</table>

5. Write the names for the following compounds and state whether they are covalent or ionic:

<table>
<thead>
<tr>
<th>NAME</th>
<th>FORMULA</th>
<th>COVALENT or IONIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>P₄S₅</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cu₂S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ca₃(PO₄)₂</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Si₂Br₆</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CoCO₃</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH₄</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B₂Si</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NF₃</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>