

Chemical Bonding Practice

Name _____

Using your periodic table

1. Identify the elements in each formula.
2. Categorize them as "metals" or "non-metals".
3. Determine the type of bond for each compound.

| Formula | Metals | Non-metals | Type of Bond |
|--------------------------------|--------|----------------------|--------------|
| HF | | Hydrogen Fluorine | Covalent |
| NaCl | Sodium | Chlorine | Ionic |
| C ₄ H ₁₀ | | | |
| Al ₂ O ₃ | | | |
| CBr ₄ | | | |
| Na ₂ S | | | |
| Sr ₃ N ₂ | | | |
| H ₂ S | | | |
| BaF ₂ | | | |
| NO ₂ | | | |

Reminder: Covalent bonds are form between nonmetals.

Ionic bonds are formed between a metal and nonmetal.

Metals, Nonmetals, and Metalloids

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|
| H | | | | | | | | | | | | | | | | | He | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Li | Be | | | | | | | | | | | B | C | N | O | F | Ne | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Na | Mg | | | | | | | | | | | Al | Si | P | S | Cl | Ar | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| K | Ca | Sc | Ti | V | Cr | Mn | Fe | Co | Ni | Cu | Zn | Ga | Ge | As | Se | Br | Kr | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rb | Sr | Y | Zr | Nb | Mo | Tc | Ru | Rh | Pd | Ag | Cd | In | Sn | Sb | Te | I | Xe | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cs | Ba | La | Hf | Ta | W | Re | Os | Ir | Pt | Au | Hg | Tl | Pb | Bi | Po | At | Rn | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fr | Ra | Ac | Rf | Db | Sg | Bh | Hs | Mt | Ds | Rg | Uub | Uuq | Uur | Uus | Uut | Uuq | Uuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; text-align: center;"> <tbody> <tr> <td>Ce</td><td>Pr</td><td>Nd</td><td>Pm</td><td>Sm</td><td>Eu</td><td>Gd</td><td>Tb</td><td>Dy</td><td>Ho</td><td>Er</td><td>Tm</td><td>Yb</td><td>Lu</td> </tr> <tr> <td>Th</td><td>Pa</td><td>U</td><td>Np</td><td>Pu</td><td>Am</td><td>Cm</td><td>Bk</td><td>Cf</td><td>Es</td><td>Fm</td><td>Md</td><td>No</td><td>Lr</td> </tr> </tbody> </table> | | | | | | | | | | | | | | | | | | Ce | Pr | Nd | Pm | Sm | Eu | Gd | Tb | Dy | Ho | Er | Tm | Yb | Lu | Th | Pa | U | Np | Pu | Am | Cm | Bk | Cf | Es | Fm | Md | No | Lr |
| Ce | Pr | Nd | Pm | Sm | Eu | Gd | Tb | Dy | Ho | Er | Tm | Yb | Lu | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Th | Pa | U | Np | Pu | Am | Cm | Bk | Cf | Es | Fm | Md | No | Lr | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |