

REVIEW and REINFORCEMENT

Predicting Types of Bonds

KEY CONCEPTS

▲ The number of electrons an atom gains, loses, or shares when it forms chemical bonds is called its oxidation number.

▲ You can use the oxidation numbers of atoms to predict how atoms will combine and what the formula for the resulting compound will be.

■ Making Predictions: Understanding the Main Ideas

Predict how the following pairs of atoms will combine by writing the formulas for the resulting compounds. Oxidation numbers are given in parentheses.

1. Mg(+2) and Cl(-1)

2. Na(+1) and CO₃(-2)

3. Sn(+2) and F(-1)

4. Al(+3) and I(-1)

5. K(+1) and Br(-1)

6. Al(+3) and O(-2)

7. Cu(+2) and I(-1)

8. Sn(+4) and Cl(-1)

9. H(+1) and SO₄(-2)

10. Ag(+1) and PO₄(-3)

11. Cd(+2) and S(-2)

12. Al(+3) and SO₄(-2)

ACTIVITY ■ Atoms and Bonding**Charting Oxidation Number**

Complete the following chart. You may wish to use the periodic table on pages 154 and 155 of the textbook.

Element	Atomic Number	Number of Protons (+)	Number of Electrons (-)	Number of Valence Electrons	Type of Ion Formed	Oxidation Number
Hydrogen	1	1	1	1	+	1+
Helium						
Lithium						
Beryllium						
Boron						
Carbon						
Nitrogen						
Oxygen						
Fluorine						
Neon						
Sodium						
Magnesium						
Aluminum						
Silicon						
Phosphorus						
Sulfur						
Chlorine						
Argon						
Potassium						
Calcium						

