Name:	Date:	Period:

Balancing Equations

Rules for Balancing Chemical Equations

- 1. Write a chemical equation with correct symbols and formulas
- 2. Count the number of atoms of each element on each side of the arrow
- 3. Law of Conservation of mass: mass is constant, it does not change
- 4. Balance atoms by using coefficients
- 5. Check your work by counting atoms of each element

For problems 1-5, use the Packet of Ions to figure out how to balance these chemical equations.

Take out the atoms to create the reactants located on the left side of the equation. Break the existing bonds, rearrange the atoms, and create new bonds to determine the products.

Record the products on the left side of the equation.

- 1) HCl+NaOH →
- 2) MgCl₂ + H $_2$ O \longrightarrow
- 3) $CuCl_2 + H_2S \longrightarrow$
- 4) Na₂O + CuBr₂ \rightarrow
- 5) HgCl₂ + 2NaBr \longrightarrow

Use the rules for balancing chemical equations to balance the following equations.

- 6) $P_4 + _O_2 \longrightarrow P_4O_{10}$
- 7) $Na + Br_2 \longrightarrow NaBr$
- 8) $Zn + HCl \longrightarrow ZnCl_2 + H_2$

