

Reinforcement**Chapter 7****BLM 7-2****Particle Relationships in Chemical Equations****Goal**

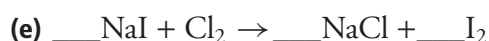
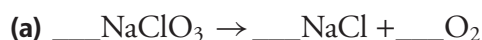
Provide additional practice in balancing chemical equations. Upon balancing, students will then examine the coefficients to determine the relationships between chemical compounds in a balanced equation.

What To Do

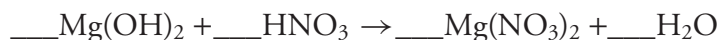
Answer the following practice problems in the spaces provided.

Practice Problems

1. Balance the following equations and state the type of reaction shown.
- | | |
|---------|---------------|
| BALANCE | REACTION TYPE |
|---------|---------------|



2. (a) Balance the following equation:



- (b) Check to make sure it is balanced by adding the individual atoms for both the reactants and products.

Products		Reactants	
Atom Type	Number of Atoms	Atom Type	Number of Atoms
Mg		Mg	
O		O	
H		H	
N		N	

- (c) Write the ratio of Mg(OH)_2 formula units to HNO_3 molecules.

- (d) Write the ratio of $\text{Mg(NO}_3)_2$ formula units to H_2O molecules.

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(continued)

- (e) How many molecules of water are formed if there are 4000 formula units of $\text{Mg}(\text{OH})_2$ initially?

Use the format shown below to help you solve this equation.

known ratio : unknown ratio

$$\frac{\text{formula units of Mg(OH)}_2}{\text{molecules of H}_2\text{O}} : \frac{4000 \text{ formula units of Mg(OH)}_2}{N \text{ molecules of H}_2\text{O}}$$

$$N =$$

- (f) Where does the information for the known ratio come from? How about the information for the unknown ratio?