Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_

**Ch. 6/7 Homework Packet**

**HW #1**

Do a lab at home tonight to answer the following question.

**Is salt or sugar easier to melt?**

Salt is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (easier or harder) to melt because…

Sugar is \_\_\_\_\_\_\_\_\_\_\_\_\_(easier or harder) to melt because…

Draw of picture of your setup:

What did you do?

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**HW #2 Balancing Equations (pages 194–195)**

**1.** Is the following sentence true or false? A chemical equation must  
be balanced in order to show that mass is conserved during a  
reaction.

**2.** Circle the letter of the name given to the numbers that appear  
before the formulas in a chemical equation.

|  |  |
| --- | --- |
| a. subscripts | b. mass numbers |
| c. atomic numbers | d. coefficients |

**3.** Is the following sentence true or false? Because the equation  
N2H4 + O2 → N2 + H2O has two nitrogen atoms on each side,  
the equation is balanced.

***Keep going on the next page! Youre not done yet!***

*Balance these equations!*

1) \_\_\_\_ AlBr3 + \_\_\_\_ K 🡪 \_\_\_\_ KBr + \_\_\_\_ Al

2) \_\_\_\_ FeO + \_\_\_\_ PdF2 🡪 \_\_\_\_ FeF2 + \_\_\_\_ PdO

3) \_\_\_\_ P4 + \_\_\_\_ Br2 🡪 \_\_\_\_ PBr3

4) \_\_\_\_ LiCl + \_\_\_\_ Br2 🡪 \_\_\_\_ LiBr + \_\_\_\_ Cl2

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5) \_\_\_\_ PbBr2 + \_\_\_\_ HCl 🡪 \_\_\_\_ HBr + \_\_\_\_ PbCl2

**HW #3 Chemical Equations (pages 192–193)**

**1.** Is the following sentence true or false? The new substances formed  
as a result of a chemical reaction are called products.

**2.** Circle the letter of each sentence that is a correct interpretation of  
the chemical equation C + O2 → CO2.

a. Carbon and oxygen react and form carbon monoxide.

b. Carbon and oxygen react and form carbon dioxide.

c. Carbon dioxide yields carbon and oxygen.

d. The reaction of carbon and oxygen yields carbon dioxide.

**3.** Is the following sentence true or false? The law of conservation  
of mass states that mass is neither created nor destroyed in a  
chemical reaction.

**4.** Circle the letter of the correct answer. According to the equation  
C + O2 → CO2, how many carbon atoms react with 14 molecules  
of oxygen to form 14 molecules of carbon dioxide?

|  |  |
| --- | --- |
| a. 1 | b. 7 |
| c. 14 | d. 28 |

**5.** In the reaction represented by the equation C + O2 → CO2, the  
mass of carbon dioxide produced equals

6. Circle the letter of each equation that represents a synthesis reaction.

a. 2Na + Cl2 → 2NaCl

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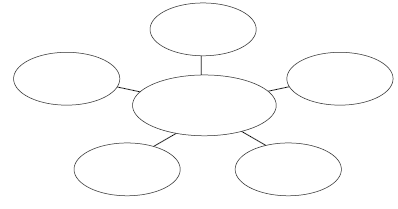
b. 2NaCl → 2Na + Cl2

c. 2H2 + O2 → 2H2O

**7.** Is the following sentence true or false? A decomposition reaction is the  
opposite of a synthesis reaction.

**HW #4 Reading Strategy (page 212)**

**Building Vocabulary** As you read, complete the web diagram below  
with key terms from this section. For more information on this  
Reading Strategy, see the **Reading and Study Skills** in the **Skills and  
Reference Handbook** at the end of your textbook.



**Factors affecting  
reaction rates**

**Reactions Over Time (page 212)**

**1.** Any change that happens over time can be expressed as a(n)  
 .

**2.** What is a reaction rate?

**Factors Affecting Reaction Rates (pages 213–215)**

**3.** Is the following sentence true or false? One way to observe the rate  
of a reaction is to observe how fast products are being formed.

**4.** Is the following sentence true or false? The rate of any reaction is a  
constant that does not change when the reaction conditions change.

**5.** Generally, an increase in temperature will   
the reaction rate.

**6.** Is the following sentence true or false? Storing milk in a refrigerator  
stops the reactions that would cause the milk to spoil.

**7.** How does an increase in surface area affect the exposure of reactants to one  
another?

**Chapter 7 Chemical Reactions**

**8.** Why does increasing the surface area of a reactant tend to  
increase the reaction rate?

**9.** Stirring the reactants in a reaction mixture will generally  
 the reaction rate.

**10.** Is the following sentence true or false? Increasing the  
concentration of the reactants will generally slow down a chemical  
reaction.

**11.** Is the following sentence true or false? A piece of material dipped  
in a concentrated dye solution will change color more quickly than  
in a dilute dye solution.

**12.** Why does an increase in pressure speed up the rate of a  
reaction involving gases?

**13.** What is a catalyst?

**14.** Circle the letters of the sentences that correctly identify why  
chemists use catalysts.

a. to speed up a reaction

b. to enable a reaction to occur at a higher temperature

c. to slow down a reaction

d. to enable a reaction to occur at a lower temperature

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