

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 $\text{N}_2\text{H}_4 + \text{O}_2 \rightarrow \text{N}_2 + \text{H}_2\text{O}$ 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) _____ AlBr_3 + _____ $\text{K} \rightarrow$ _____ KBr + _____ Al
- 2) _____ FeO + _____ $\text{PdF}_2 \rightarrow$ _____ FeF_2 + _____ PdO
- 3) _____ P_4 + _____ $\text{Br}_2 \rightarrow$ _____ PBr_3
- 4) _____ LiCl + _____ $\text{Br}_2 \rightarrow$ _____ LiBr + _____ Cl_2
- 5) _____ PbBr_2 + _____ $\text{HCl} \rightarrow$ _____ HBr + _____ PbCl_2

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HW #3 Chemical Equations (pages 192–193)

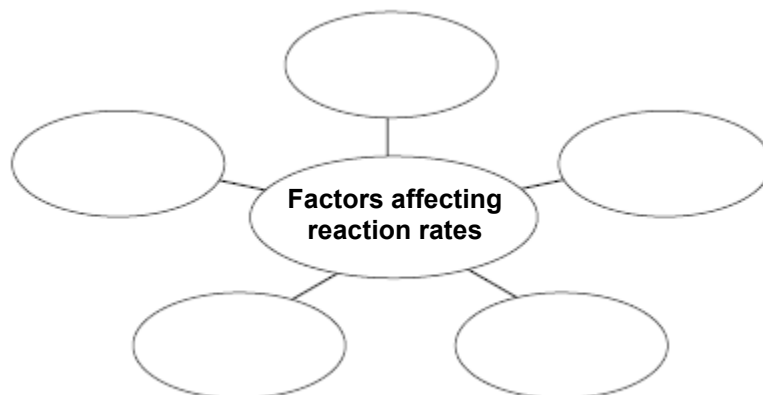
1. Is the following sentence true or false? The new substances formed as a result of a chemical reaction are called products. _____
2. Circle the letter of each sentence that is a correct interpretation of the chemical equation $\text{C} + \text{O}_2 \rightarrow \text{CO}_2$.
 - a. Carbon and oxygen 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 $\text{C} + \text{O}_2 \rightarrow \text{CO}_2$, 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 $\text{C} + \text{O}_2 \rightarrow \text{CO}_2$, the mass of carbon dioxide produced equals _____

6. Circle the letter of each equation that represents a synthesis reaction.
 - a. $2\text{Na} + \text{Cl}_2 \rightarrow 2\text{NaCl}$
 - b. $2\text{NaCl} \rightarrow 2\text{Na} + \text{Cl}_2$
 - c. $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$
7. Is the following sentence true or false? A decomposition reaction is the
opposite of a synthesis reaction. _____

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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.



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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