

# Chemical Reactions #2

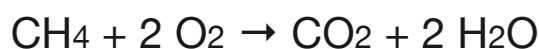
Name \_\_\_\_\_ Hour \_\_\_\_\_

1. When a substance changes into a new substance a **chemical / physical** change has occurred. (circle one)

\_\_\_\_\_ 2. A formula is a shorthand way to represent...

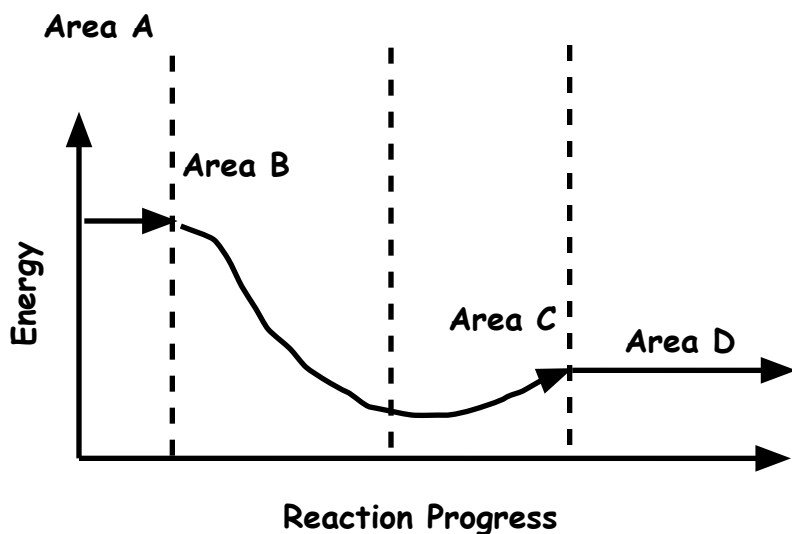
- a. elements                      b. molecules  
c. reactions                      d. atoms

Look at this example:



3. This example represents a chemical reaction. A shorthand way to represent a chemical reaction called a(n) \_\_\_\_\_

4. In the example above place a box around the reactants and a circle around the products.



5. Which area of the graph best shows the reactants? \_\_\_\_\_

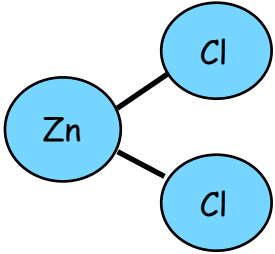
6. Which area of the graph best shows the products? \_\_\_\_\_

7. Which area of the graph best shows the beginning of the reaction? \_\_\_\_\_

8. Which area of the graph best shows the ending of the reaction? \_\_\_\_\_

9. Was overall energy gained or lost in this reaction? \_\_\_\_\_

10. Write in the name of the element and number of atoms in each example.

Molecule	Atoms
NaHCO <sub>3</sub>	
	

Use the following to answer questions 11 - 15. When answering the question, place the letter(s) in the blank.

A. P      B. FeBr<sub>2</sub>      C. Ne      D. HF

11. Which of the above is/are a molecule? \_\_\_\_\_

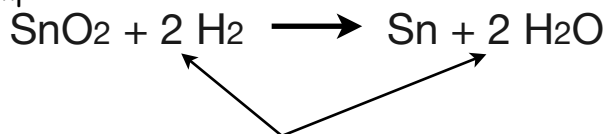
12. Which of the above is/are an element? \_\_\_\_\_

13. Which of the above is/are a symbol? \_\_\_\_\_

14. Which of the above is/are an atom? \_\_\_\_\_

15. Which of the above is/are a formula? \_\_\_\_\_

Look at this example:



\_\_\_\_\_ 16. In this example these numbers are called ...

- a. subscripts
- b. mass number
- c. atomic number
- d. coefficients

17. The arrow  $\longrightarrow$  in the middle of the example above means \_\_\_\_\_

18. List the 4 signs of a chemical change. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_