

1 Matter and Change

Reviewsheet

A. Completion

Use this completion exercise to check your understanding of the concepts and terms introduced in this chapter. Each blank can be completed with a term, short phrase, or number.

Chemistry is a natural science that deals with 1 and the changes it undergoes. Matter is anything that has 2 and occupies 3. Matter exists in three states, 4, 5, and 6.

Chemists use the 7 method to learn how matter can be changed. An 8 is a means that a chemist can use to test a hypothesis about changes in matter. A physical combination of two or more substances is a 9. A mixture has a variable composition and may be identified as 10 or 11. Homogeneous mixtures are known as 12 and have uniform properties.

A pure substance is either a 13 or a 14. Compounds are made up of 15, which are always present in the same 16 in a given compound. Compounds can be separated into their constituent elements only by 17 reaction. A change in the properties of a substance without a change in the composition is a 18 change. If the composition changes, then a 19 reaction has occurred. In a chemical reaction, 20 are converted to products. 21 changes are usually reversible; many 22 changes are not easily reversible. The law of 23 states that mass is neither created nor destroyed in any physical or chemical reaction.

1. _____ 1.3
2. _____ 1.3
3. _____ 1.3
4. _____ 1.4
5. _____ 1.4
6. _____ 1.4
7. _____ 1.2
8. _____ 1.2
9. _____ 1.6
10. _____ 1.6
11. _____ 1.6
12. _____ 1.6
13. _____ 1.7
14. _____ 1.7
15. _____ 1.7
16. _____ 1.7
17. _____ 1.7
18. _____ 1.5
19. _____ 1.9
20. _____ 1.9
21. _____ 1.9
22. _____ 1.9
23. _____ 1.10¹⁰

B. Questions

Answer the following questions in the space provided.

24. State whether each of the following is a homogeneous or heterogeneous mixture. 1.6

- | | |
|------------------------------|----------|
| a. oxygen dissolved in water | a. _____ |
| b. carbon mixed with sand | b. _____ |
| c. apple juice | c. _____ |
| d. vegetable soup | d. _____ |
| e. sour milk | e. _____ |

25. When 400 grams of wood are burned, 30 grams of ash remain. What happened to the missing 370 g of matter? 1.10

26. Car batteries give off a potentially explosive mixture of gases. What kind of change is taking place in the battery? 1.9
