

## 12-1 Review and Reinforcement

### *Chemical Reactions That Involve Heat*

On the line at the left, write the letter of the definition that best matches each term.

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|--------------------------------|--|
| _____ 1. heat                  | a. reactions that release heat                               |
| _____ 2. thermochemistry       | b. the SI unit of energy and heat                            |
| _____ 3. exothermic reactions  | c. the energy that is transferred from one object to another |
| _____ 4. endothermic reactions | d. the study of the changes in heat in chemical reactions    |
| _____ 5. joule                 | e. example of an exothermic reaction                         |
| _____ 6. combustion            | f. reactions that absorb heat                                |

If the statement is true, write "true." If it is false, change the underlined word or words to make the statement true. Write your answer on the line provided.

- \_\_\_\_\_ 7. It is energy that maintains your body temperature close to 37°C.
- \_\_\_\_\_ 8. Bond breaking in chemical reactions releases energy.
- \_\_\_\_\_ 9. Heat is transferred between two objects that are at the same temperature.
- \_\_\_\_\_ 10. An exothermic reaction absorbs heat from the environment.
- \_\_\_\_\_ 11. All combustion reactions are exothermic.
- \_\_\_\_\_ 12. If a reaction is endothermic, the amount of heat appears on the right side of the arrow in the balanced equation.
- \_\_\_\_\_ 13. Energy can be stored in the chemical bonds of a substance.

Answer each of the following questions in the space provided.

14. Provide two examples from daily life that demonstrate how heat is transferred from one object to another.

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\_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

**12-1 Review and Reinforcement (continued)**

15. Why is the joule, the SI unit of energy, also the appropriate unit for measuring heat?

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16. Provide an analogy that explains why bond breaking requires energy.

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17. When ammonium chloride dissolves in a beaker of water, the beaker becomes cold to the touch. Explain this phenomenon.

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