

Review and Reinforce

What Is Energy?

Read pp. 108-113

Understanding Main Ideas

Answer the following questions in the spaces provided.

1. How are work and energy related?

Work is the transfer of energy.

2. How is power related to energy?

Power is the rate at which energy is transferred

3. What are the two basic kinds of energy?

Potential and Kinetic

4. A girl who weighs 30 kg is inline skating at a speed of 5 m/s. What is the girl's kinetic energy?

KE = 375.0 J

5. A hat that weighs 5 newtons is hanging from a hook 1.5 meters above the floor. How much gravitational potential energy does the hat have?

7.5 J

Building Vocabulary

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

- | | |
|--|---|
| 6. <u>B</u> energy | a. potential energy related to an object's height |
| 7. <u>D</u> kinetic energy | b. the ability to do work or cause change |
| 8. <u>E</u> potential energy | c. energy associated with objects that can be compressed or stretched |
| 9. <u>A</u> gravitational potential energy | d. the energy an object has due to its motion |
| 10. <u>C</u> elastic potential energy | e. energy that results from an object's position or shape |

Review and Reinforce

Forms of Energy Read pp. 114-119

Understanding Main Ideas
 Answer the following questions in the spaces provided.

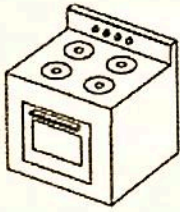
- How can you determine an object's mechanical energy?
Mechanical energy is determined by
+ dividing potential energy and kinetic energy

- Name two forms of energy associated with the particles that make up objects.
Nuclear, electrical, Chemical, thermal
or electromagnetic


Building Vocabulary
 Match each illustration with the correct form(s) of energy by writing the letter or letters of the form(s) of energy on the line at the left.

- a. mechanical energy
- b. electrical energy
- c. thermal energy
- d. nuclear energy
- e. chemical energy
- f. electromagnetic energy

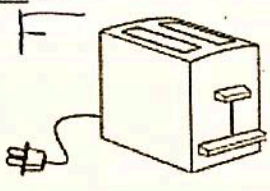
C, B, F 3.
E



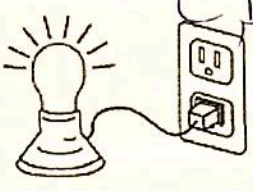
A, E 4.



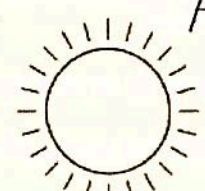
E, B 5.
C, F



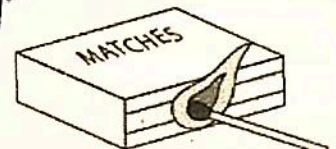
B, C, F 6.



C, D, F 7.



A, C, E 8.
F



Review and Reinforce

Energy Transformations and Conservation

Read pp. 120-125

Understanding Main Ideas
Study the illustration below and then read the following statements. If the statement is true, write *true*. If the statement is false, change the underlined word or words to make the statement true.



- All points ^{False} An energy transformation is occurring only at point 3.
- ball never loses kinetic energy In this example, the law of conservation of energy says that the ball never loses kinetic energy.
- True As the ball rises from point 1 to point 3, it slows down.
- True The ball has the most potential energy at point 3.
- False 4 The ball has the most kinetic energy as it leaves point 2.

Building Vocabulary
Write a definition for each of these terms on the lines below.

- energy transformation

- law of conservation of energy

