InterActions Unit 2 Chapter 2 Sample Quiz

REMEMBER exams are given for the last chapter in a unit. They are comprehensive. So practice taking the Unit 2 Chapter 1 quiz again along with this practice exam.

1. When the motion energy of an object is decreasing, the object is

    a. speeding up

    b. not moving

    c. slowing down

    d. moving at constant speed

2. Which type of interaction increases the thermal energy of the interacting objects?

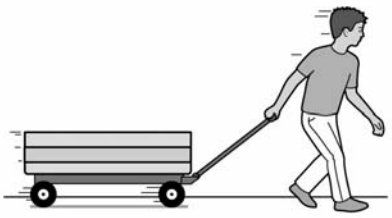
    a. applied

    b. friction

    c. elastic

    d. mechanical wave

3. A boy pulls a wagon at constant speed. The interaction between the boy and the wagon is



   a. a drag interaction.

   b. a friction interaction.

   c. an elastic interaction.

   d. an applied interaction.

4. A boy pulls a wagon at constant speed. The motion energy of the wagon

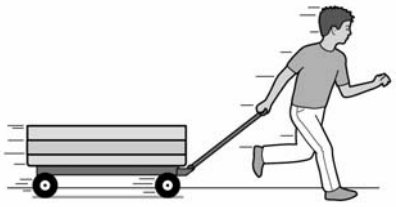
   a. increases.

   b. decreases.

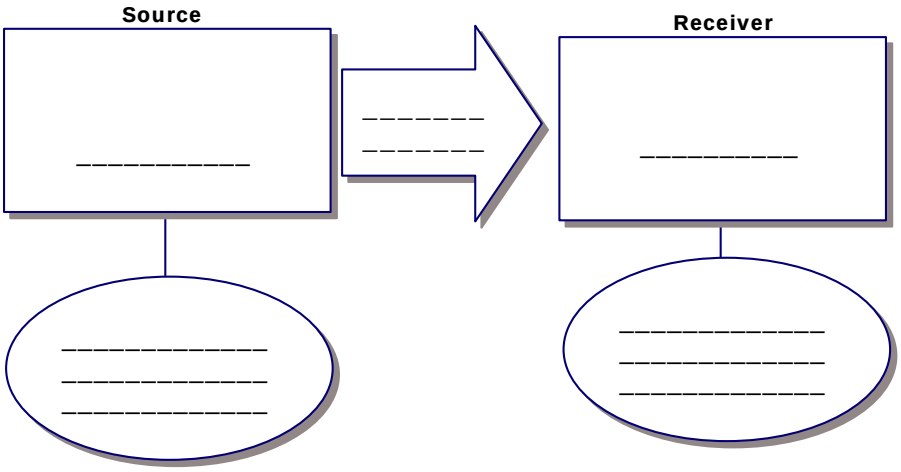
   c. doesn't change.

   d. There is not enough information to answer the question.

5. Now the boy speeds up as he pulls the wagon. Fill out the energy diagram for the wagon as it is pulled faster and faster by the boy.



Interaction



6. A marble is dropped in shampoo. During this drag interaction

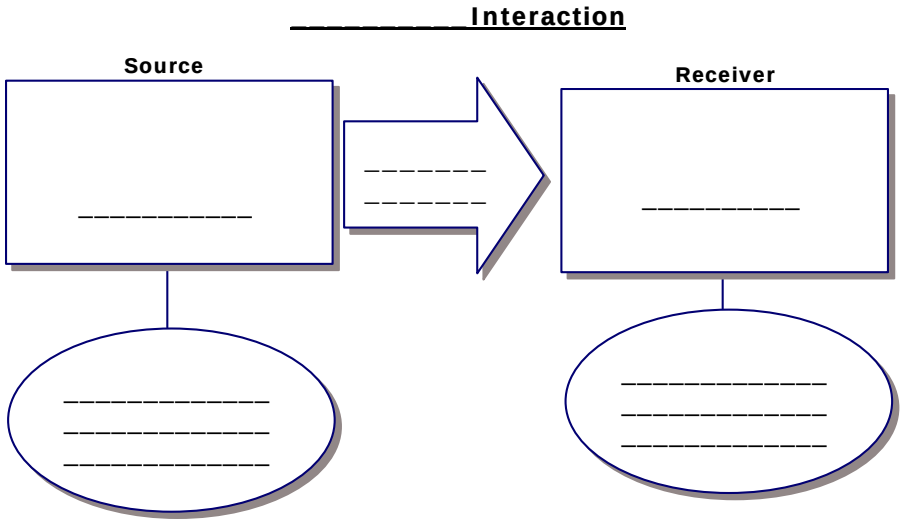
   a. the marble speeds up and the shampoo slows down.

   b. the shampoo speeds up and the marble slows down.

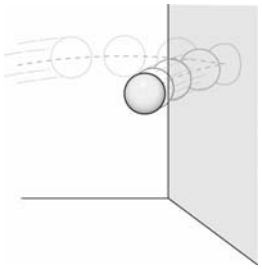
   c. both the marble and the shampoo slow down.

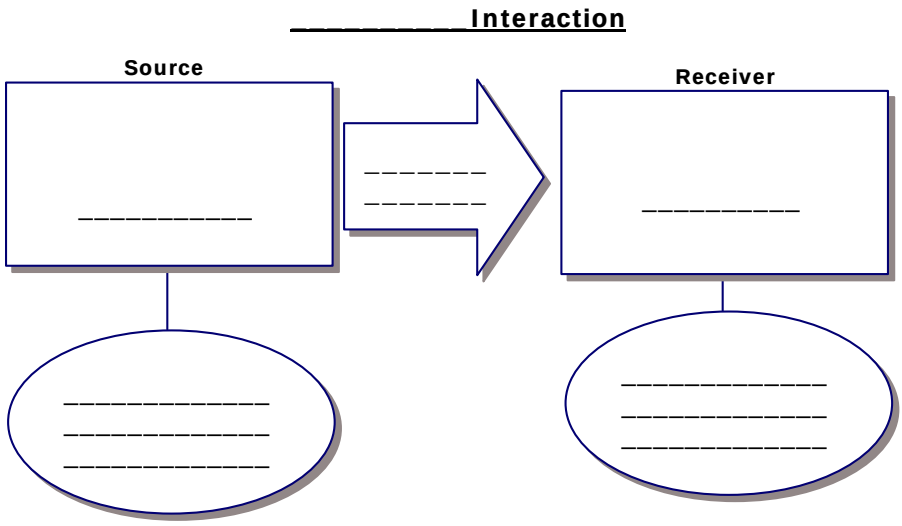
   d. both the marble and the shampoo speed up

7. A boat slows down in the water. Fill out the energy diagram of the situation



8. A ball is thrown at a wall and bounces off. As the ball first reaches the wall it slows down, momentarily stops, and then speeds up in the opposite direction as it leaves the wall. Fill out the energy diagram describing the interaction between the ball and the wall as the ball is slowing down. Explain why the ball slows down.

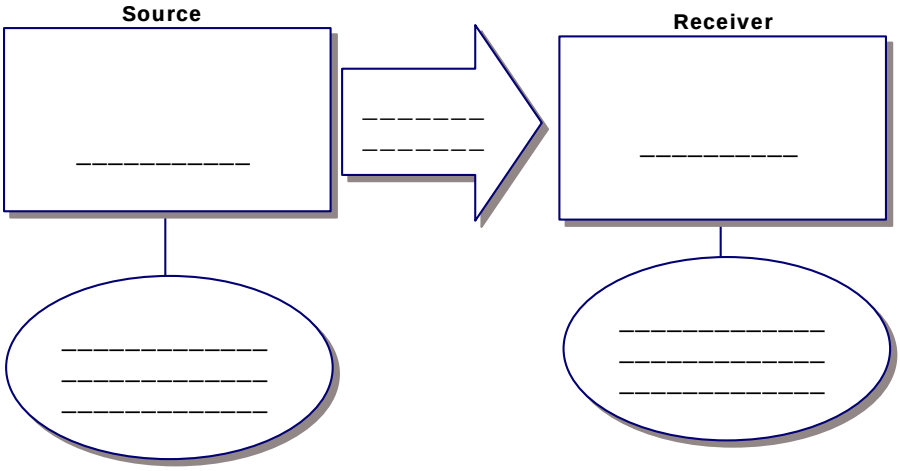




Explanation:

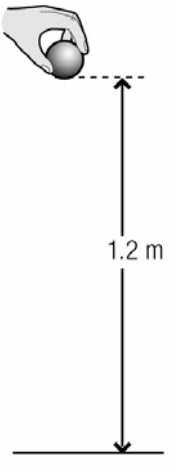
9. Naguib slides a box of chocolates across the table to Gertrude. The box of chocolates slows down and comes to rest just in front of Gertrude. Fill out the energy diagram below describing the interaction between the box and the table. Analyze and explain why the box slows down.

Interaction



Explanation:

10. Sam is asked to find out how long it takes a ball to fall to the ground when it is dropped from 1.2 m. What should Sam do?



a. Since the time it takes a ball to fall is an exact value, Sam should take only one measurement.

b. If Sam were a scientist he would only need one measurement, but Sam is a middle school student so he should take a few measurements.

c. Sam should carefully take one measurement. If he takes many measurements he is more likely to make a mistake.

d. Sam should take many measurements and then analyze the data. This will be more accurate than one measurement.

Questions 11 and 12.

Here is some data about how far different toy cars travel.

Data Table:			
Toy Car Name	Toy Car Type	Surface	Average Distance Traveled (cm)
A	van	desk	25
B	car	track	35
C	car	desk	20
D	car	board	30
E	truck	desk	25
F	suv	track	30

11. Which of the toy car types would you select to make a fair test if you wanted to answer the following question?

    If the surface changes what happens to the distance the car travels?

    a. Cars A, B, E, and F

    b. Cars B, C, and D

    c. Cars A, E, and F

    d. All the cars.

12. Suppose you want to make a fair test if you wanted to answer the following question: *If the car type changes what happens to the distance the car travels?*

    Which set of car types listed below should you use?

    a. Cars A, C, E, and F

    b. Cars A, D, E, and F

    c. Cars A, C, and E

    d. All the cars.