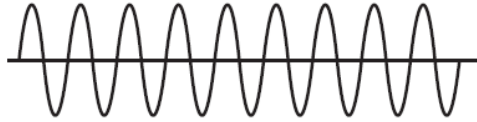


Milestones Review – 8th Science – Homework – Due 3/17

Name: _____

1. A machine converts sound into a transverse wave as shown.



If the sound becomes louder, what would the new sound wave look like?

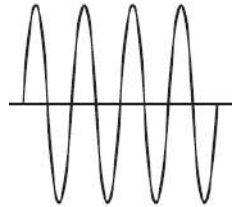
a.



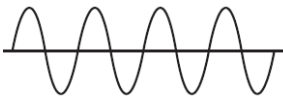
b.



c.



d.



2. When a roller-coaster car reaches the top of a hill and starts going downward, there is a change in the direction and speed of the car.

Which of these can also be concluded about the roller-coaster car as it is going downward?

- Its kinetic energy decreases as its potential energy proportionally increases.
 - Its potential energy decreases as its kinetic energy proportionally increases.
 - Both its potential and kinetic energy proportionally increase.
 - Both its potential and kinetic energy proportionally decrease.
3. A student performs an investigation to determine the properties of an iron nail. The list to the right shows her findings. Which statement is correct about the student's findings?
- Rusting is a physical property of iron.
 - Hardness is a chemical property of iron.
 - Rusting and bending are chemical properties of iron.
 - Density and hardness are physical properties of iron.

The nail can rust.

The nail is denser than water.

The nail is very hard.

The nail can be bent.

4. While conducting an experiment, a student determines the gravitational force between two objects of equal mass. He uses this as his control for the experiment. He then conducts five additional experiments. He performs the experiments with the changes listed, measuring the effect of each on the gravitational force between the objects and comparing the result to the information from the control.

Experiment 1. Replace one control object with an object that is double the mass of the objects in the control at the control distance.

Experiment 2. Replace both control objects with objects that are double the mass of the objects in the control at the control distance.

Experiment 3. Using the control objects, double the distance between the objects compared to the control.

Experiment 4. Using the control objects, reduce the distance between the objects by half compared to the distance in the control.

Experiment 5. Replace one control object with an object that is half the mass of the objects in the control at the control distance.

Which pair of experiments BOTH resulted in a decrease in the gravitational force between the two objects compared to the control?

- a. 2 and 3
 - b. 3 and 4
 - c. 3 and 5
 - d. 4 and 5
5. In order to boil an egg, a student puts the egg in a pan of water and heats the pan on the stove.
- Which methods of heat transfer are used to transfer the majority of the heat to the water and to the egg?
- a. radiation and convection
 - b. radiation and conduction
 - c. conduction and convection
 - d. conduction, convection, and radiation