

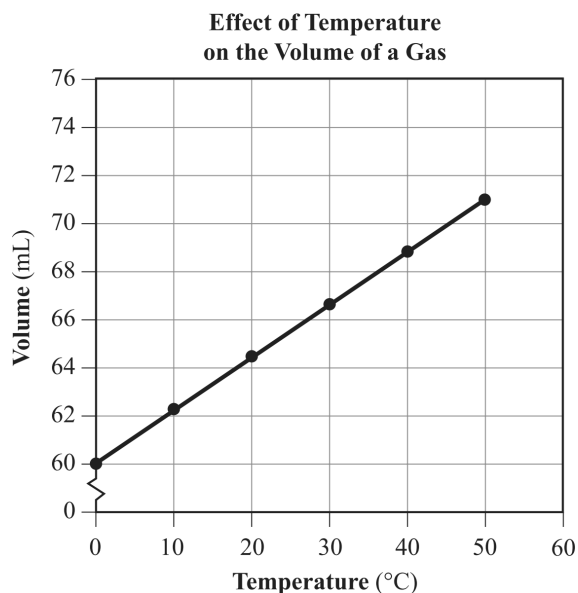
3rd Quarter Review #1

Name: _____

Date: _____

- Which statement *correctly* describes both gases and liquids?
 - Their shapes stay the same in any container.
 - Their shapes change when they are in different containers.
 - Their volumes stay the same in any container.
 - Their volumes change when they are in different containers.
- On a warm sunny afternoon, ocean water splashed onto a rock. A short time later, the rock was dry. Which statement *best* explains what happened to the water on the rock?
 - Heat caused the water to become a gas.
 - Heat melted the water and it disappeared.
 - Salt caused the water to become a gas.
 - Salt melted the water and it disappeared.
- A glass of ice water is placed on a table. After 10 minutes, there are drops of water on the outside surface of the glass. Which change in phase caused the drops of water?
 - Liquid water in the air evaporated into a gas.
 - Liquid water in the air condensed into a solid.
 - Water vapor from the air evaporated into a liquid.
 - Water vapor from the air condensed into a liquid.
- A teacher places an item in a box. The item takes the shape of the entire container. This item is *most likely*
 - air.
 - milk.
 - water.
 - paint.

- The graph below shows the effect of temperature on the volume of a gas.



Which generalization can be made about the relationship between the temperature and volume of a gas?

- As the temperature of a gas decreases, its volume increases.
 - As the temperature of a gas decreases, its volume stays the same.
 - As the temperature of a gas increases, its volume increases.
 - As the temperature of a gas increases, its volume stays the same.
- A ball is dropped from the top of a tall building. As the ball falls, the upward force of air resistance becomes equal to the downward pull of gravity. When these two forces become equal in magnitude, the ball will
 - flatten due to the forces.
 - fall at a constant speed.
 - continue to speed up.
 - slow to a stop.

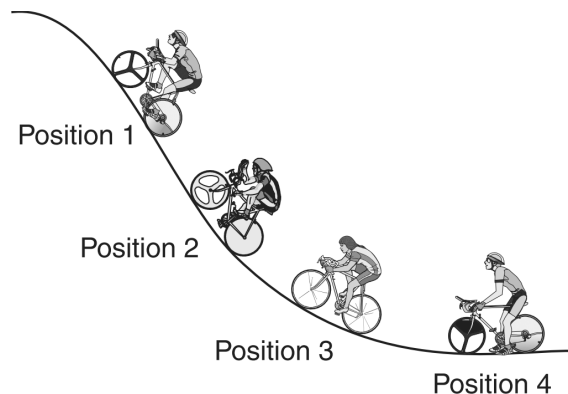
7. A student holds a book at rest in an outstretched hand. The force exerted on the book by the student is equal to the book's

A. mass. B. weight.
C. volume. D. density.

8. Which type of force requires **contact** between two objects for one to push or pull the other?

A. frictional forces slowing down a rolling soccer ball
B. the magnetic force pulling paper clips to a powerful electromagnet
C. the magnetic force pushing two magnets apart
D. the force of gravity acting on raindrops that fall to Earth

9. Use the picture below to answer the following question.



In which position does the rider use the *least* amount of force?

A. position 1 B. position 2
C. position 3 D. position 4

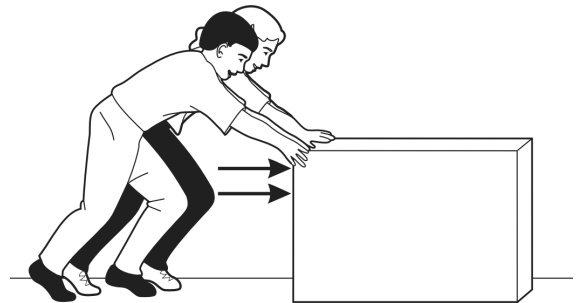
10. Jeannie put her soccer ball on the ground on the side of a hill. Which force acted on the soccer ball to make it roll down the hill?

A. gravity B. electricity
C. friction D. magnetism

11. A student is driving her car when an insect strikes her windshield. Which of the following statements *best* describes the forces in this situation?

A. The insect strikes the windshield with the same force as the windshield strikes the insect.
B. The insect strikes the windshield with a force, and the windshield exerts no force on the insect.
C. The insect exerts no force on the windshield, and the windshield strikes the insect with a large force.
D. The insect strikes the windshield with a small force, and the windshield strikes the insect with a large force.

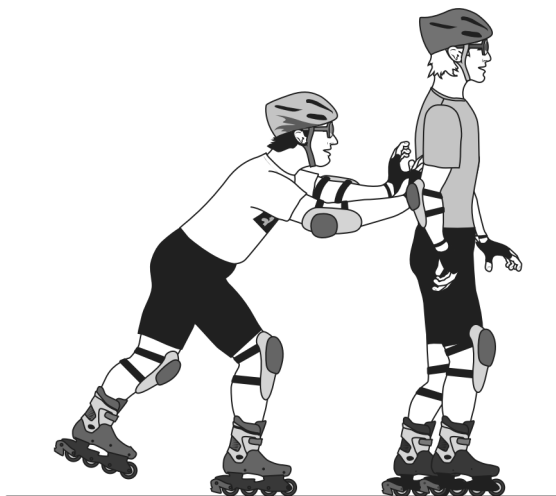
12. Two people are trying to push a large box across a floor. Each person pushes with an equal amount of force.



The total amount of force they exert on the box is 500 newtons. Despite their efforts, the box will not move. What is the amount of force exerted by the box on each person?

A. 0 newtons B. 250 newtons
C. 500 newtons D. 1,500 newtons

13. Two students are in-line skating. The diagram below shows student S pushing student T. Student S has a mass of 60 kg, and student T has a mass of 40 kg.



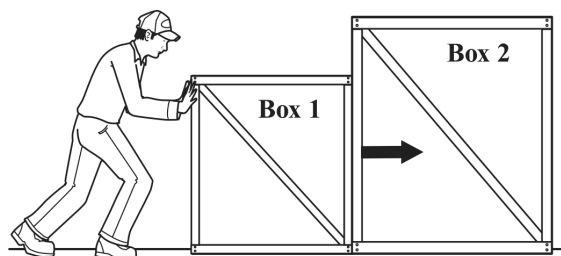
Student S

Student T

Student S is pushing student T in a straight line with a force equal to the friction on student T's skates. Which of the following must happen if student S continues to push student T with the same force?

- A. Student T will lose his balance.
- B. Student T will travel in a circle.
- C. Student T will move at a constant velocity.
- D. Student T will move at a constant acceleration.

14. A worker in a warehouse pushes two wooden boxes across a floor at a constant speed, as shown in the diagram below.



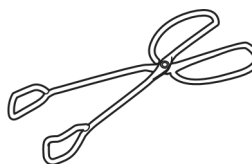
The arrow in the diagram represents the force box 1 exerts on box 2. Which arrow represents the reaction force?

- A.
- B.
- C.
- D.

15. Jonas needs to split a log. He has a sledge hammer. What other tool should he also use to split the log?

- A. a lever
- B. a pulley
- C. a wedge
- D. a fulcrum

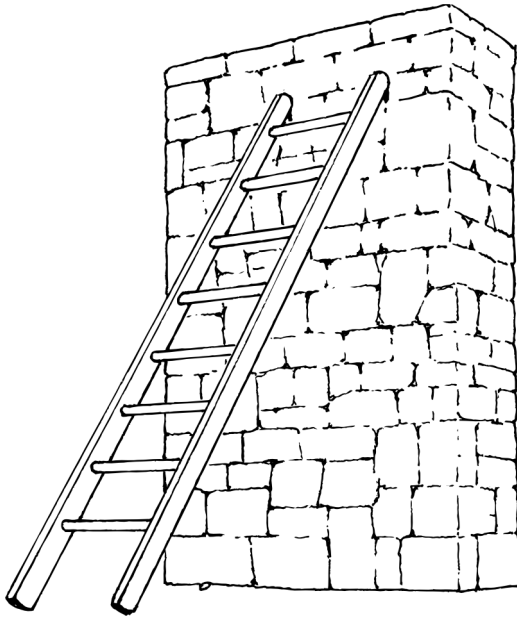
16. The picture below shows tongs.



The tongs work as which of the following simple machines?

- A. inclined plane
- B. lever
- C. pulley
- D. wedge

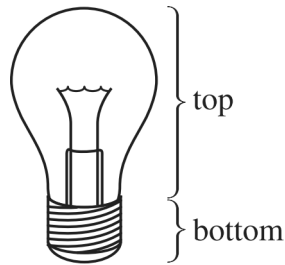
17. The picture shows a ladder leaning against a wall.



A person climbing this ladder is using the ladder as

- A. a lever. B. a wedge.
C. a simple gear. D. an inclined plane.

18. The picture below shows a light bulb.



The bottom of this light bulb is an example of what type of simple machine?

- A. a lever B. a pulley
C. a screw D. a wedge
19. Which is an example of a chemical reaction?
- A. nails rusting B. glass melting
C. sugar dissolving D. alcohol vaporizing
20. Which of the following represents a chemical reaction?
- A. a sugar cube dissolving in water
B. ice cubes forming in a freezer
C. ice cream melting in a bowl
D. a cake baking in an oven
21. Which of the following forms of energy is released or absorbed in *most* chemical reactions?
- A. light energy B. electrical energy
C. sound energy D. heat energy