Name:_____ Date:_____

1. Which tool is a part of a system for making sounds louder?

A. 

B. 

C. 

D. 

2. Which force does a friend use to make you go higher on a playground swing?

A. pull
B. push
C. lever
D. pulley

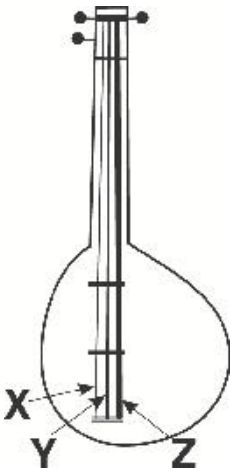
3. Ruth sat on the floor and played with a wooden spoon and a pan. If Ruth hit the pan with the spoon, it would sound most like a

A. car horn.
B. crying baby.
C. drum.
D. train whistle.

4. Which would make the softest sound?

A. balloon popping
B. hammer hitting a nail
C. eraser hitting a chalkboard
D. metal rod hitting a musical triangle

5. *Use the picture below to answer this question.*



The picture shows a stringed instrument with strings of three different thicknesses. Which statement is true?

A. Strings X and Y will vibrate at the same speed.

B. String X will vibrate the fastest and produce the highest tone.

C. String X will vibrate the slowest and produce the lowest tone.

D. Strings Y and Z will produce the same sound.

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6. A magnifying glass makes it easier to see a small object because the curved surface of the glass

A. bends the light rays coming from the object.
B. makes the light brighter.
C. changes the object's color.
D. keeps you from seeing other objects.

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7. Jill shoots a basketball but it falls short of the hoop. Which should Jill do to make a score from the same place?

A. use less force on the ball
B. use more pull on the ball
C. use more force on the ball
D. use less energy on the ball

---

8. Which is a simple machine?

A. water
B. chair
C. pulley
D. candle

9. Jason saw a rainbow after a rainstorm. What produces a rainbow when light travels through water droplets?

A. The light is absorbed into air molecules.
B. The light is not allowed to move forward.
C. The light is separated into a spectrum.
D. The light is released in its same form.

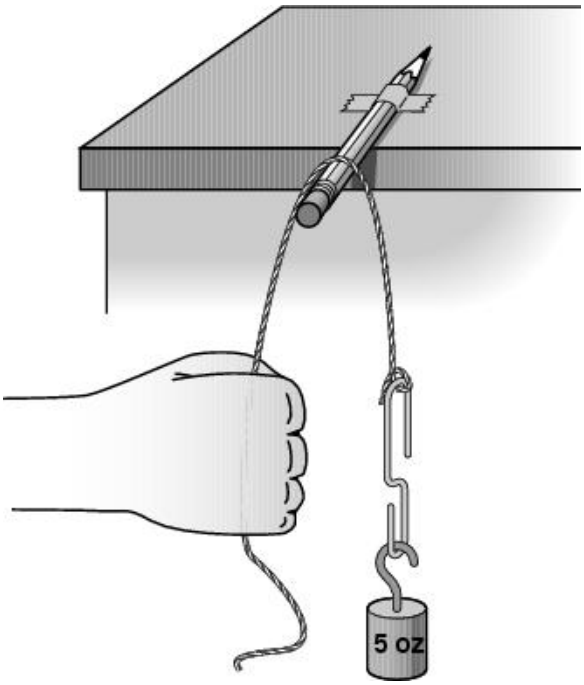
10. Which sound would probably have the highest pitch?

A. a balloon popping
B. a hammer hitting wood
C. an eraser hitting a chalkboard
D. a metal rod hitting a musical triangle

11. All sound is made by

A. vibrations.
B. heat energy.
C. magnetism.
D. reflections.

12. Meg made the simple machine shown below using a pencil, tape, string, and a weight.



What type of simple machine is it?

A. lever

B. ramp

C. wheel

D. pulley

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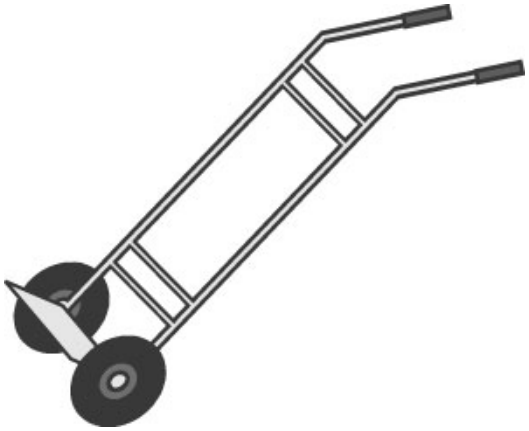
13. Which of these is a simple machine?

A. a crayon
B. a wagon
C. a book
D. a paper clip

14.

Use the picture below to answer this question.



The hand truck shown in the picture is used in stores to move boxes. Which simple machines are part of a hand truck?

A. pulley and lever
B. lever and wheel and axle
C. inclined plane and wheel
D. pulley and inclined plane

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15. Two astronauts walking on the Moon are trying to communicate with each other. Which way of communicating will NOT work for them?

A. ringing a bell
B. flashing a light
C. using a radio
D. waving a hand

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16. Jamie is pulling a wagon along the floor. Sara wants to ride in the wagon. For Jamie to pull the wagon with Sara in it at the same speed that he was pulling the empty wagon, Jamie will have to

A. exert more force on the wagon.
B. exert less force on the wagon.
C. exert the same force on the wagon.
D. push the wagon down a ramp.

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17. Which sound has a pitch that is MOST DIFFERENT from the other three sounds?

A. fire alarm
B. train whistle
C. bouncing ball
D. smoke detector

18. When you walk on the sidewalk and roll your bike, the force you use is a

A. pull.
B. pulley.
C. push.
D. lever.

19. ALL sounds are caused by

A. the vibration of objects or materials.
B. sudden changes in temperature.
C. air currents.
D. electrical currents in air.

20. The sound that a person hears from a drum is produced by

A. echoes.
B. reflections.
C. pulses.
D. vibrations.

21.

Use the picture below to answer this question.

Several simple machines are used to make a bicycle. Which is an example of a lever?

A. the wheel
B. the seat
C. the brake
D. the chain

22.

Use the picture below to answer this question.

One of the simple machines from the picture that is used to move trash from one place to another uses

A. a wheel.
B. a pulley.
C. an inclined plane.
D. a lever.

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23. Billy was pulling his wagon on the sidewalk. What should he do to keep the wagon moving?

A. Walk behind the wagon.
B. Apply a force to the wagon.
C. Put a weight in the wagon.
D. Walk on the side of the wagon.

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24. Which of the following statements about noise is true?

A. Listening to loud music is less harmful if you do it a lot and get used to it.
B. Loud music is better for your ears than other sounds that are just as loud.
C. Loud music can damage the inside parts of your ears.
D. Hearing damage caused by loud noise eventually goes away.

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25. Johnnie's bike is in the bike rack at school. It will remain there until Johnnie rides it home after school.

What force keeps his bike from falling over sideways?

A. pull of gravity on the bike
B. push of the bike rack on the bike
C. push of the ground up on the bike
D. friction between the tires and the ground

Answer Key

1. C)

2. B) push

3. C) drum.

4. C) eraser hitting a chalkboard

5. B) String X will vibrate the fastest and produce the highest tone.

6. A) bends the light rays coming from the object.

7. C) use more force on the ball

8. C) pulley

9. C) The light is separated into a spectrum.

10. D) a metal rod hitting a musical triangle

11. A) vibrations.

12. D) pulley

13. B) a wagon

14. B) lever and wheel and axle

15. A) ringing a bell

16. A) exert more force on the wagon.

17. C) bouncing ball

18. C) push.

19. A) the vibration of objects or materials.

20. D) vibrations.

21. C) the brake

22. A) a wheel.

23. B) Apply a force to the wagon.

24. C) Loud music can damage the inside parts of your ears.

25. B) push of the bike rack on the bike