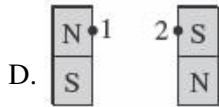
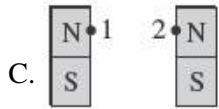


Name: \_\_\_\_\_

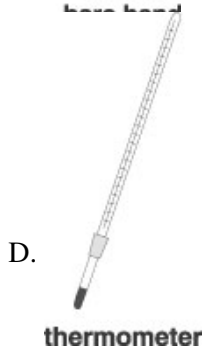
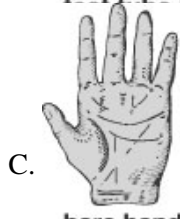
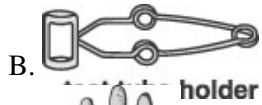
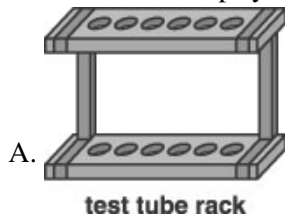
Date: \_\_\_\_\_

1. In which case would it take the **most** effort to make points 1 and 2 on the magnets touch each other?



*This online assessment item contains material that has been released to the public by the Massachusetts Department of Education.*

2. Which item helps you measure the temperature of water?



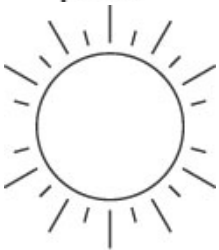
3. We can use heat energy from



A.  
**a glass of  
ice water**



B.  
**a flowering  
plant.**



C.  
**the Sun.**



D.  
**a rabbit.**

---

4. If you put a metal spoon in hot water, the spoon will

- A. melt.
- B. dissolve.
- C. get cold.
- D. get hot.

---

5. Your bare foot burns when you step onto the hot pavement because the heat moves

- A. from the pavement to the air.
  - B. from the pavement to your foot.
  - C. from your foot to the pavement.
  - D. from your foot to the air.
-

6. Use the picture below to answer this question.



The temperature reading is

- A. 10°C.
  - B. 12°C.
  - C. 15°C.
  - D. 20°C.
- 

7. Which is an insulator?

- A. copper coin
  - B. aluminum ladder
  - C. glass
  - D. water
- 

8. Which does NOT make heat?

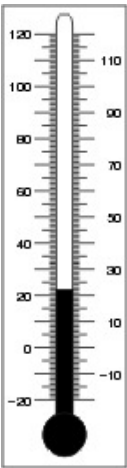
- A. a burning candle
  - B. an electric current
  - C. a campfire
  - D. a sweater
- 

9. Four different spoons were put into a pan of boiling water. Which spoon will have a hot handle first?

- A. metal spoon
  - B. rubber spoon
  - C. wooden spoon
  - D. plastic spoon
-

10.

Use the picture below to answer this question.



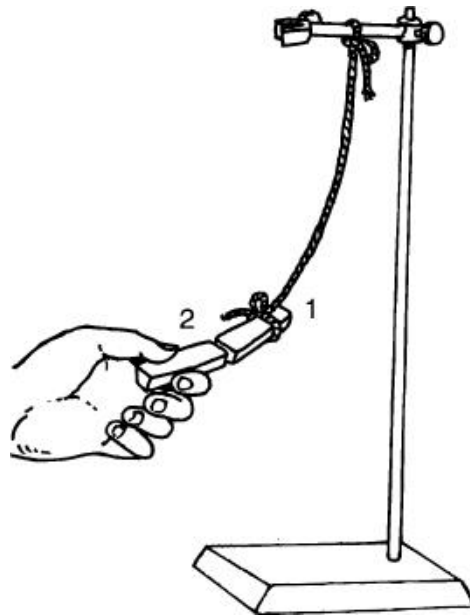
Most thermometers are read by looking at the position of the red liquid in a glass tube. Which tells how this type of thermometer works?

- A. The glass expands (gets larger) when hot.
  - B. The glass contracts (gets smaller) when hot.
  - C. The red liquid expands (gets taller) when hot.
  - D. The red liquid contracts (gets shorter) when hot.
- 

11. Where is the BEST place to find information about heat convection?

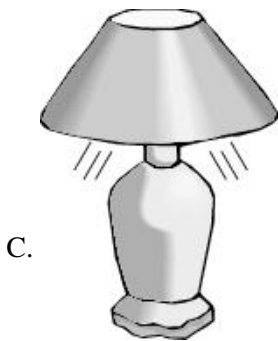
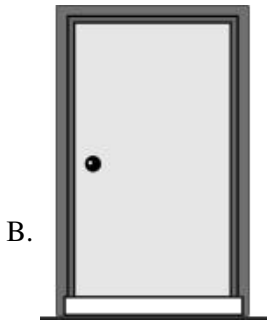
- A. an encyclopedia or computer
  - B. a map or globe
  - C. a chart or graph
  - D. a TV or radio
-

12. Tony's class was observing the properties of magnets. Using the diagram, what would happen if magnet #2 was turned around so the other end was next to magnet #1?



- A. The magnets would move away from each other.
  - B. The magnets would become negatively charged.
  - C. The magnets would create an electromagnetic field.
  - D. The magnets would stick together in the same way.
-

13. Which object is a source of heat energy in a home?



---

14.

You make a 100 on your most recent test. To display it proudly, you stick it to the \_\_\_\_\_ with a magnet.

- A. couch
  - B. TV screen
  - C. refrigerator
  - D. front window
-

15.

Which of these statements is true?

- A. A larger magnet attracts only large objects.
  - B. Unlike poles repel, and like poles attract.
  - C. Like poles repel, and unlike poles attract.
  - D. All magnets will stick to any metal.
- 

16.

Which of these statements is true of magnets??

- A. All magnets attract glass.
  - B. Some magnets attract paper.
  - C. Some magnets attract plastic.
  - D. Magnets attract certain metals.
- 

17.

The force that creates heat energy when an eraser is rubbed across paper is

- A. electricity.
  - B. friction.
  - C. fire.
  - D. radiation.
- 

18.

Which of these examples produces heat energy through friction?

- A. a log burning in a fireplace
  - B. an ice cube melting in a glass of soda
  - C. mixing a chemical to produce an instant hot pack
  - D. an eraser being moved back and forth across a paper
- 

19.

Which answer best explains why you would wear thick, warm clothes in bitterly cold weather?

- A. to conduct heat
  - B. to keep you cool
  - C. to make heat
  - D. to help insulate against the cold
- 

20.

What is used to keep objects cold?

- A. outlet
  - B. chemicals
  - C. conductor
  - D. insulator
-

21.

Early one morning a thermometer reads 65 degrees Fahrenheit. Later that day the same thermometer reads 90 degrees Fahrenheit. What is the difference in temperature that day?

- A. 30 degrees warmer
  - B. 35 degrees colder
  - C. 24 degrees difference
  - D. 25 degrees difference
- 

22. Which of these is attracted to a magnet?

- A. An iron nail
- B. A copper penny
- C. A silver spoon
- D. An aluminum pan

*Permission has been granted for reproduction by the Virginia Department of Education  
© Virginia Department of Education*

---

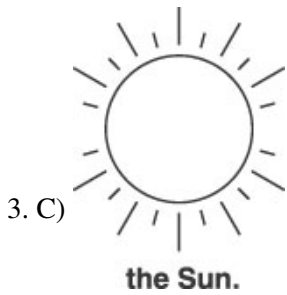
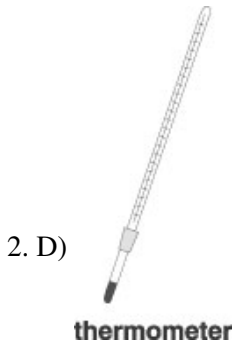
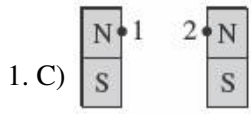
23. A piece of metal is probably a magnet if it —

- A. can pull some metals to it.
- B. has a dull metal color.
- C. becomes rusty in the rain.
- D. has the letter N on it.

*Permission has been granted for reproduction by the Virginia Department of Education  
© Virginia Department of Education*



**Answer Key**



4. D) get hot.

5. B) from the pavement to your foot.

6. B) 12°C.

7. C) glass

8. D) a sweater

9. A) metal spoon

10. C) The red liquid expands (gets taller) when hot.

11. A) an encyclopedia or computer

12. A) The magnets would move away from each other.



13. C)

14. C) refrigerator

15. C) Like poles repel, and unlike poles attract.

16. D) Magnets attract certain metals.

17. B) friction.

18. D) an eraser being moved back and forth across a paper

19. D) to help insulate against the cold

20. D) insulator

21. D) 25 degrees difference

22. A) An iron nail

23. A) can pull some metals to it.