

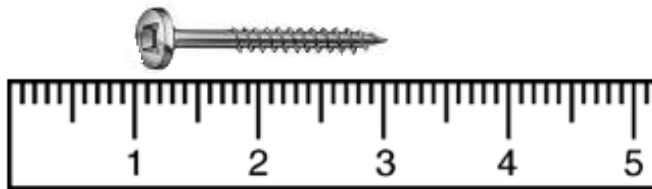
EOC 7th Grade
District Common Assessment

1. Todd needs to measure 50 grams of table salt for an experiment.
Which measuring device will most accurately measure 50 grams?

- A) graduated cylinder B) triple beam balance C) metric ruler D) thermometer

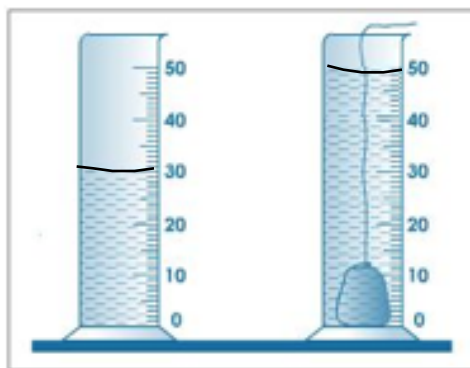
2. What is the length (in millimeters)
of this screw?

- A) 10 mm B) 20 mm
C) 30 mm D) 40 mm

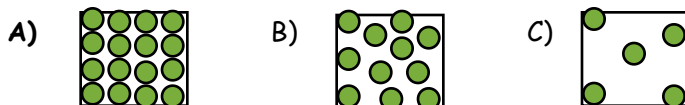


3. An irregular shaped object was dropped in a graduated cylinder with 30 mL of water.
The volume of the water rose to 50 mL.
What is the volume of the object?

- A) 20 mL B) 30 mL
C) 50 mL D) 80 mL



4. Which diagram below represents matter in a liquid state?



5. Freddie picked up a small rock using a magnet. Which of the following did the rock probably contain?

- A) quartz B) diamond C) aluminum D) iron

6. Which of the following represents a chemical change?

- A) Ice is melting on a table. B) Dissolving sugar in water.
C) Aluminum metal is pounded into thin sheets. D) Copper reacts with a strong acid.

7. Jason performs an experiment in a lab. He inappropriately mixes
the chemicals and an explosion of light, sound, and heat occurs.
When Jason mixed the chemicals, energy was

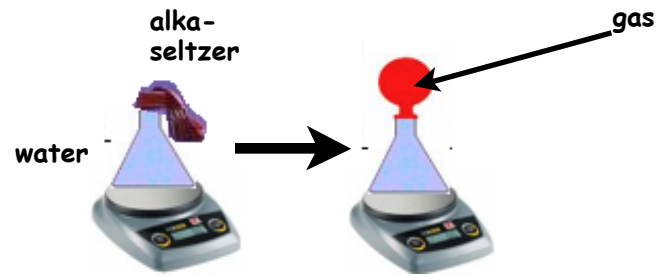
- A) destroyed
B) created
C) stabilized
D) transformed



8. You put alka seltzer into a balloon and place it on a flask of water. After recording its mass, you lift the balloon and let the alka seltzer fall into the water. The tablet dissolves quickly and the balloon inflates. After the reaction you measure the mass again.

What should happen to its mass?

- A) The mass will increase
- B) The mass will decrease
- C) The mass will be the same
- D) Not enough information to tell



9. The picture shows two cars that are sitting in the Sun. They are exactly the same except that one is black and one is white. Which of the following is true?

- A) Both of the cars will heat up at the same rate.
- B) The black car will heat up faster than the white car.
- C) The white car will heat up faster than the black car
- D) Neither of the cars will heat up.



10. Keith has a metal ring on a stick and metal ball on another stick. If the ball barely fits through the ring now, what will happen if Keith heats the ball?

- A) The ball will expand
- B) The molecules will move faster inside the ball
- C) The ball will not fit through the ring.
- D) all of the above



11 An example of heat transfer through radiation is

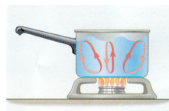
A) laying out in the sun



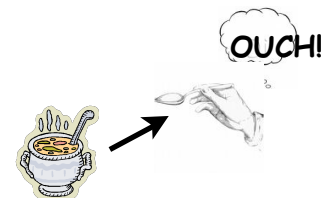
B) turning on the heat in the house to warm it up



C) soup heating up in a pan



D) touching a hot spoon



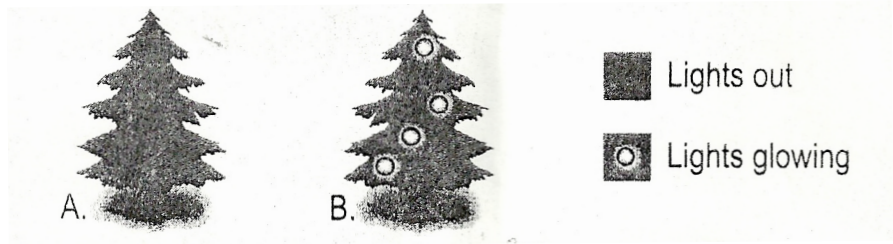
12. Steven ate a granola bar and then went for a run. He ran one mile and sweat heavily. Steven's body transformed chemical energy from the granola bar into

- A) electrical and heat energy
- B) mechanical and heat energy
- C) electrical and sound energy
- D) mechanical and light energy



13. At the beginning of the season, the lights on the Christmas trees below were turned on and all the lights were glowing. After 2 weeks, none of the lights on tree A were glowing. Some of the lights on tree B were glowing and some were not glowing.

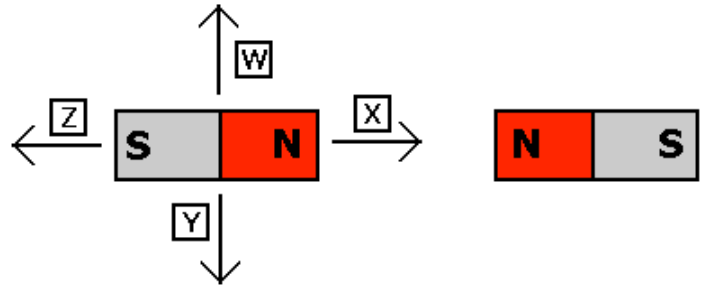
On which tree (A or B) were the lights hooked in parallel?



14. June is building a circuit. She wants to add something that will NOT conduct electricity. June wants to add _____ to her circuit, so she chooses _____.

- A) an insulator, plastic B) a conductor, plastic
C) an insulator, a copper wire D) a conductor, a copper wire

15. Look at the picture of the two magnets below. If the magnets were hung next to each other, which arrow shows the direction that they would move?



- A) arrow W B) arrow X
C) arrow Y D) arrow Z

16. If Cynthia pulls a wagon 10 meters in 5 seconds, what is the speed of the wagon? ($S = D/T$)

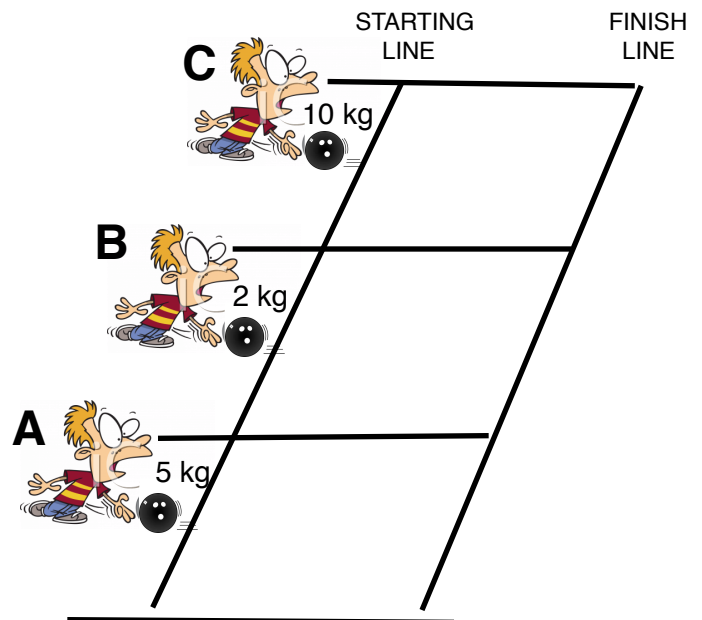
- A) 15 m/s B) 5 m/s
C) 2 m/s D) 50 m/s



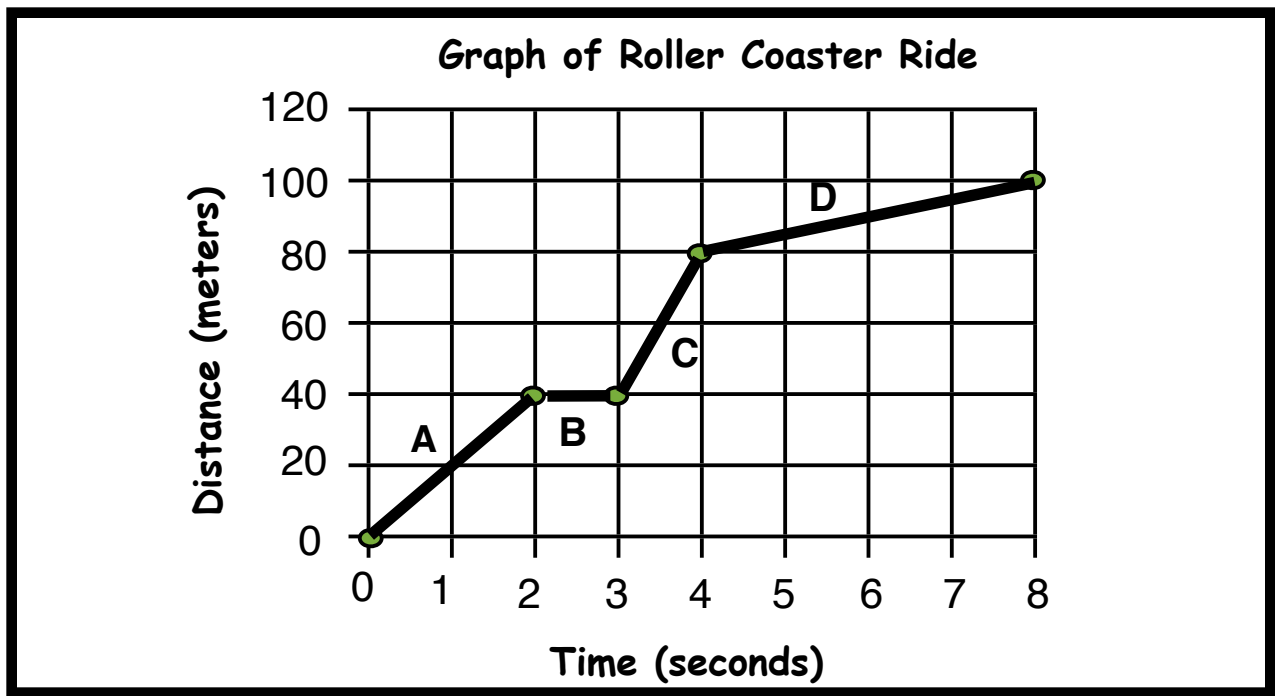
17. Each contestant on the right is pushing a bowling ball down the alley. The mass of each bowling ball is labeled on the right.

If each contestant applies the same amount of force to their ball,

- A) ball A will accelerate more.
B) ball B will accelerate more.
C) ball C will accelerate more.
D) ball A, B and C will accelerate the same.



USE THE GRAPH TO ANSWER QUESTIONS 18 and 19



18. During which interval is the roller coaster's speed the greatest?

- A) section A B) section B
 C) section C D) section D

19. How might you explain the motion of the roller coaster in section B on the graph?

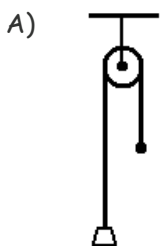
- A) The roller coaster is speeding up. B) The roller coaster is slowing down.
 C) The roller coaster is moving at a constant speed. D) The roller coaster is stopped.

20. John applies 2 N of force to a box and the box moves a distance of 3 meters. How much work has been done? ($W = F \times d$)

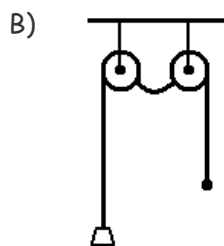
- A) 1 J B) 1.5 J
 C) 5 J D) 6 J



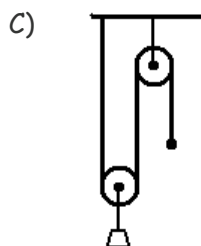
21. Which of the pulley systems shown below will lift the weight using the least amount of effort force?



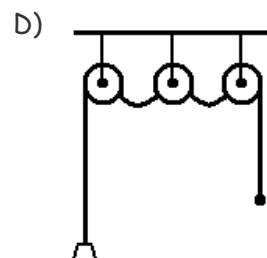
one fixed pulley



two fixed pulleys



one fixed pulley & one movable pulley



three fixed pulleys

22. Porky is using a wheelbarrow to move a load of bricks to build his brick house. He pushes on the wheelbarrow with 2 N of force, but 2 N of friction acts in the opposite direction. What will happen to the wheelbarrow?

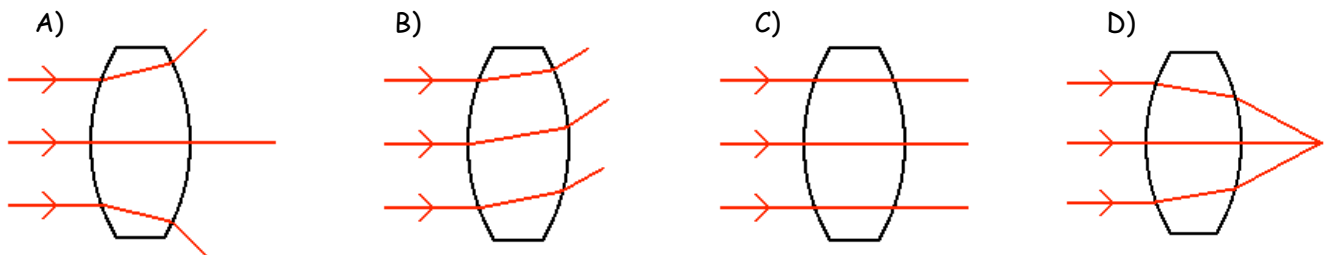


- A) The wheelbarrow will move forward.
- B) The wheelbarrow will move backwards.
- C) The wheelbarrow will not move at all.
- D) There is not enough information to tell.

23. The colors of the visible spectrum are determined by how long the wavelength of the light wave is. Which color has the shortest wavelength?

- A) violet
- B) red
- C) yellow
- C) green

24. Which of the following diagrams correctly shows how a convex lens refracts light.

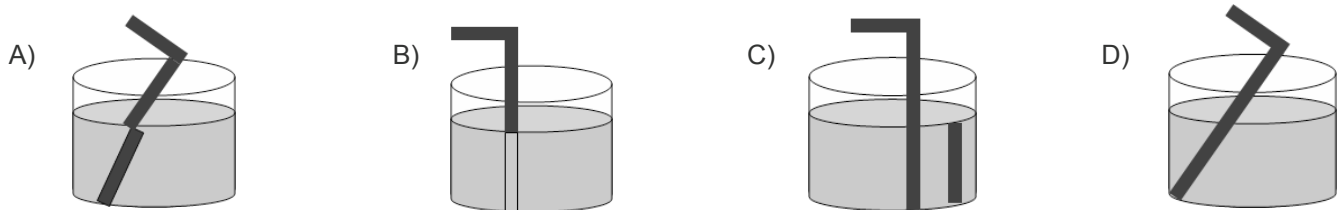


25. Why does a red rose look red?



- A) The rose receives only red light from the Sun.
- B) The rose reflects red more than any other color.
- C) The rose absorbs red more than any other color.
- D) The rose refracts red more than any other color.

26. Which diagram shows an example of refraction?



27. You are outside of a long mining tunnel. You have a friend that is several thousands of feet away from you inside the tunnel. Using a walkie talkie, you tell your friend to yell AND clang on the pipes on the tunnel floor at the same time.

Which sound will you hear first?

- A) The sound of your friend yelling because sound travels faster in air than through metal.
- B) The sound of your friend clanging on the pipes because sound travels faster through metal than through air.
- C) Both sounds will reach you at the same time because sound travels at the same speed through metal and air.
- D) Neither sound because sound does not travel.

