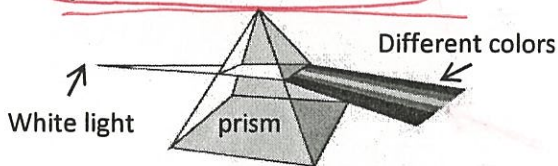


Force, Motion, and Energy- 5.6B(R), 5.6C(R), 3.6B(S)

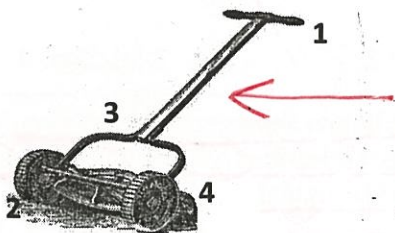
Name \_\_\_\_\_

1. When light travels through a prism, it separates into different colors. Which property of light causes the light to separate into different colors?



- (A) Refraction *Bend*
- (B) Reflection *Bounce*
- (C) Absorption *Stop*
- (D) Conduction *?*

2. Pictured below is a reel mower. *push*



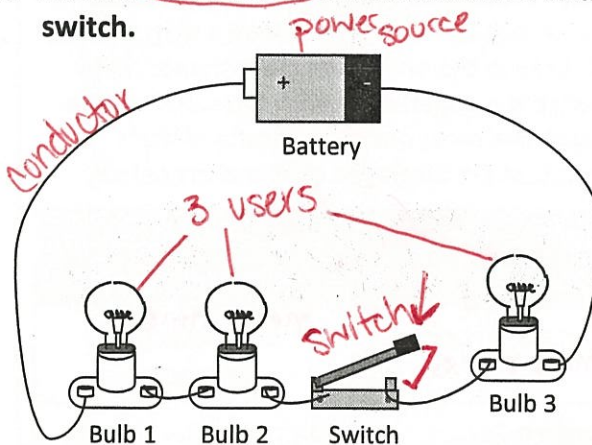
At which point would a person need to apply force to move the reel mower?

- (F) Position 2
- (G) Position 3
- (H) Position 4
- (J) Position 1

3. Which of these best demonstrates light and reflection? *Bouncing*

- (A) Looking through a hand lens *Refract*
- (B) Looking at a still lake and seeing your image appear on top of the still water *Reflective*
- (C) Looking through a clear marble *Transmit*
- (D) Looking at a bulb in a street light *produces light*

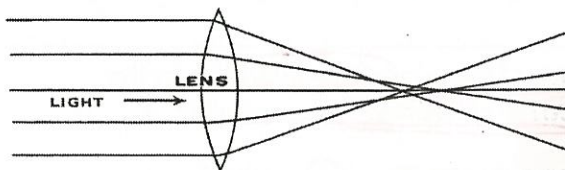
4. This is a series circuit with three bulbs and a switch.



According to the diagram above, which bulbs will light up?

- (F) 1
- (G) 0
- (H) 3
- (J) 2

5. A camera has a lens which is a curved piece of glass. This lens takes the beams of light from an object and redirects it to form a real image. The lens of a camera is shown below.



Which of the following best describes how the camera lens forms a real image.

- (A) The camera lens reflects light. *Refract*
- (B) The camera lens absorbs light. *Bounce*
- (C) The camera lens bounces light. *STOPS*
- (D) The camera lens refracts light. *Reflect*



Force, Motion, and Energy- 5.6B(R), 5.6C(R), 3.6B(S)

Name \_\_\_\_\_

6. A group of students designed an experiment to see how long it would take to pull a wagon filled with rocks to the end of the playground. They repeated the experiment with the same wagon but took the rocks out. The results of their experiment are displayed on the chart below.

object	Time it takes to pull the wagon
Wagon with rocks <i>more mass</i>	<i>more time</i> 3 minutes 15 seconds
Wagon without rocks <i>less mass</i>	1 minute 45 seconds <i>less time</i>

Which conclusion best supports the results shown in the table?

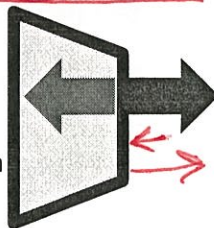
- (F) It took more force to pull the wagon with rocks; therefore, taking more time. *more mass*
- (G) It took less force to pull the wagon without rocks; therefore, taking more time.
- (H) The students were tired from pulling the wagon with the rocks.
- (J) The wagon with rocks took less time to pull.

7. Which of these is NOT needed to test the electrical conductivity of an object?

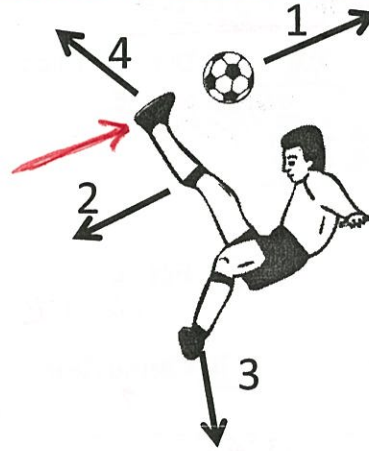
- (A) energy source *battery*
- (B) wires *conductor*
- (C) light bulb *user*
- (D) water *Not safe*

8. Robert places a picture of an arrow on his desk and holds a mirror up next to it. Which statement best explains why the arrow appeared backward in the mirror?

- (F) Reflection *Bounce*
- (G) Refraction *Bend*
- (H) Absorption *Stop*
- (J) Conduction *?*



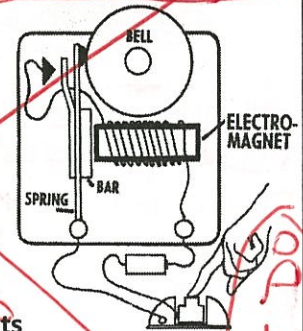
9. A soccer player kicks a ball in the air. In which direction does the ball most likely move after the soccer player kicks the ball?



- (A) Direction 3
- (B) Direction 2
- (C) Direction 1
- (D) Direction 4

10. The diagram below shows a complete circuit. Which answer best describes how the electromagnet is being used in this circuit?

- (F) The electromagnet produces light energy and the bell will ring.
- (G) The electromagnet produces electrical energy and the bell will ring.
- (H) The electromagnet prevents the bell from ringing.
- (J) The electromagnet provides heat energy for the circuit.



Electricity → magnetism

11. Why does the straw in the ice water appear to be broken?

- (A) Light is hitting the outside of the glass and is being reflected. *Bounce*
- (B) Light is going through the water and is being refracted. *Bent*
- (C) Light is being absorbed by the glass. *stopped*
- (D) Light is being insulated by the glass. *Heat or Elect.*

