

Electricity Practice (Demo Version)

Read each question carefully.

1) How do lenses and mirrors work together in a telescope?

- A) Lenses shine light onto mirrors.
 - B) Mirrors stop light from entering lenses.
 - C) Lenses focus the light that mirrors reflect.
 - D) Mirrors give color to the light that lenses produce.
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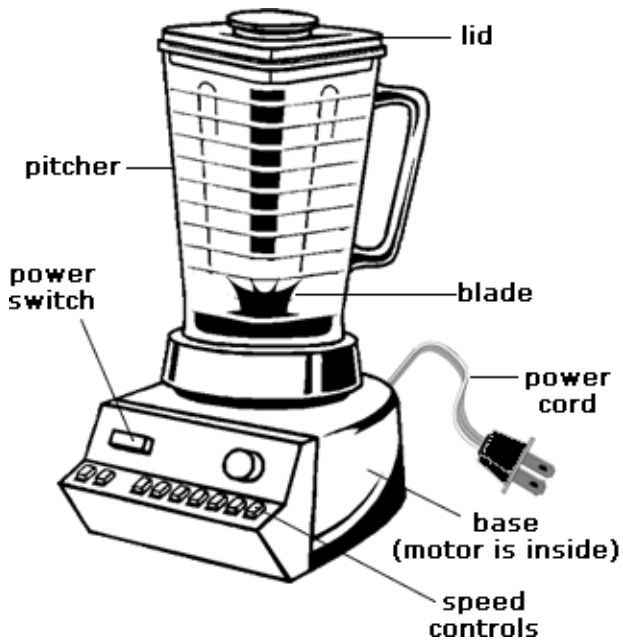
2) How do the brakes and wheels work together in a bicycle?

- A) The brakes slow down the wheels.
 - B) The brakes supply power to the wheels.
 - C) The brakes keep the wheels from going flat.
 - D) The brakes provide support for the wheels.
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"Parts of a Blender"

The picture below shows some parts of a blender.



3) from "Parts of a Blender"

Which part of the blender delivers electricity to the motor?

- A) blades
- B) power switch
- C) speed controls
- D) power cord

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4) from "Parts of a Blender"

Which part of the blender makes the motor go fast or slow?

- A) base
 - B) blade
 - C) power switch
 - D) speed controls
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5) Which of the following will produce light?

- A) metal attracting a magnet
 - B) ice melting in water
 - C) sound coming from a speaker
 - D) electricity heating a wire
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6) Which turns electrical energy into sound energy?

- A) bicycle
 - B) stereo
 - C) drum
 - D) flute
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7) The picture below shows a drill that is plugged into an outlet.

Why does the drill turn on when the trigger is pulled?



- A) The trigger turns the drill into an electromagnet.
 - B) The trigger is a switch that closes the circuit.
 - C) The trigger causes the drill to produce electricity.
 - D) The trigger sends a signal to the outlet.
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8) Which of the following will produce heat?

- A) sound
 - B) thermometer
 - C) electricity
 - D) gravity
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9) Which of the following converts electrical energy into sound?





- A) piano
 - B) drum
 - C) doorbell
 - D) lamp
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10) Which turns electrical energy into light energy?

- A) grandfather clock
 - B) popcorn popper
 - C) computer monitor
 - D) microphone
-

11) Which of the following converts electrical energy into magnetic effects?

- A)  A lit candle in a holder, representing a source of light energy.
 - B)  A microscope, representing a device that uses light energy for observation.
 - C)  An electromagnet, consisting of a coil of wire around a core, connected to a battery, representing a device that converts electrical energy into magnetic effects.
 - D)  A flashlight, representing a device that converts electrical energy into light energy.
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12) The picture below shows a toaster.

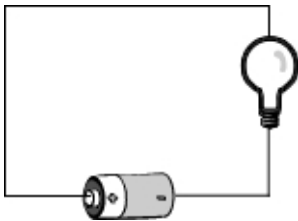
Why does the toaster turn on when the lever is pushed down and the plug is in an outlet?



- A) Pushing down the lever causes the outlet to begin making electricity.
 - B) Pushing down the lever causes the toaster to begin making electricity.
 - C) Pushing down the lever closes the circuit between the toaster and the outlet.
 - D) Pushing down the lever opens the circuit between the toaster and the outlet.
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13) The picture below shows a circuit.

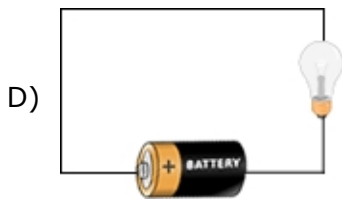
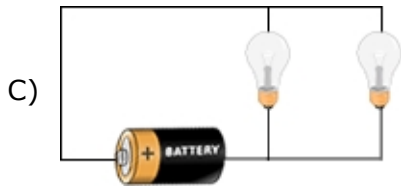
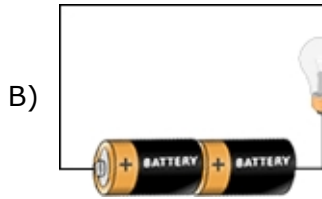
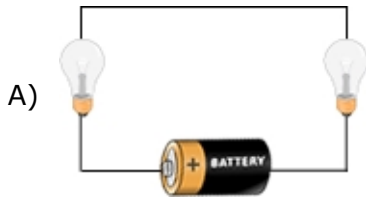
What will most likely happen if a second battery is added to this circuit?



- A) The first battery will die.
 - B) The first battery will become stronger.
 - C) The bulb will become brighter.
 - D) The bulb will become dimmer.
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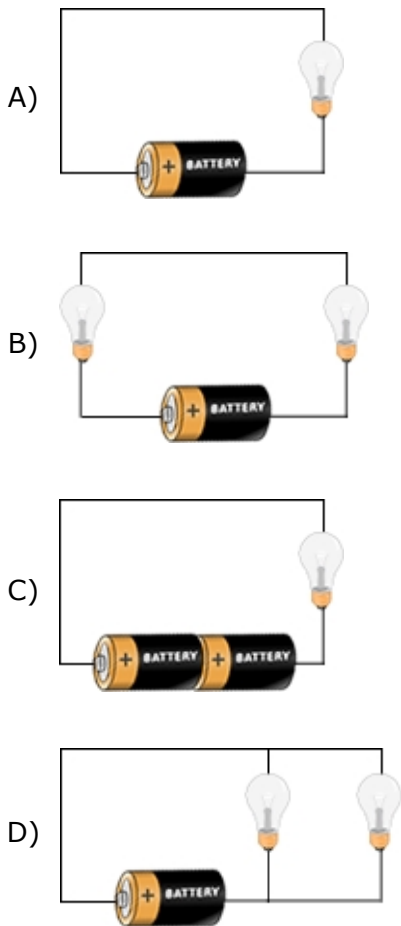
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14) Which of the following is a parallel circuit?



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15) In which of the following circuits will the bulb(s) most likely shine brightest?



16) Imagine a circuit has one battery and one bulb.

Why might the bulb become very bright and then burn out if two more batteries are added to the circuit?

- A) because the three batteries cancelled each other out
- B) because the two extra batteries caused the first battery to die
- C) because the most batteries any circuit can contain is one
- D) because the extra batteries sent too much electricity into the bulb

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17) Complete the following:

- a. Is the copper wire in a circuit a conductor or insulator?
 - b. Explain your answer to Part a.
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18) When one plugs in an electrical cord, they do not get an electric shock.

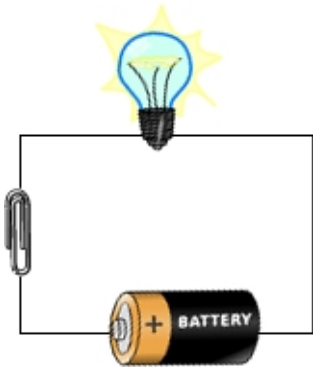
Which statement best explains why?

- A) The rubber around the electrical wires is a good conductor of electricity.
 - B) The rubber around the electrical wires changes the direction of the electric current.
 - C) The rubber around the electrical wires does not conduct electricity well.
 - D) The rubber around the electrical wires changes the charge of the electric current.
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19) The graphic below shows electricity flowing through a circuit to light a bulb.

Which of the following best describes the paperclip?



- A) The paperclip is a conductor.
 - B) The paperclip is a battery.
 - C) The paperclip is an insulator.
 - D) The paperclip is a magnet.
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20) Which statement best describes a conductor?

- A) a material through which thermal energy cannot move
 - B) a material through which thermal energy moves slowly
 - C) a material through which thermal energy creates electricity
 - D) a material through which thermal energy moves easily
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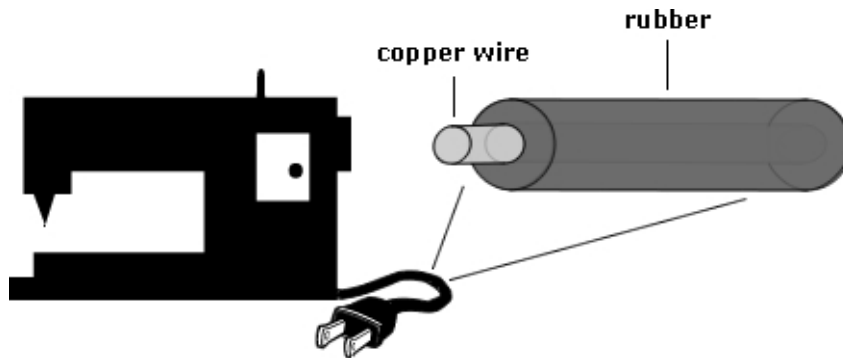
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21) Which statement best describes an insulator?

- A) An insulator causes electricity to flow more slowly.
 - B) An insulator causes electricity to flow more quickly.
 - C) An insulator does not allow electrons to flow easily.
 - D) An insulator allows electrons to flow easily.
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22) The picture below shows the parts of a sewing machine power cord.

Which statement is true?



- A) The copper wire conducts the electric current that flows through the rubber.
 - B) The copper wire insulates the electric current that flows through the rubber.
 - C) The rubber conducts the electric current that flows through the copper wire.
 - D) The rubber insulates the electric current that flows through the copper wire.
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23) Which of the following best explains the purpose of a plastic handle on a metal pan?

- A) Plastic handles help the pan heat up quickly.
 - B) Plastic handles make the pan lighter.
 - C) Plastic handles control how fast the food cooks.
 - D) Plastic handles insulate hands from hot metal.
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24) The graphic below shows a blender.

Which of the following best describes the rubber in the electrical cord?



- A) It is a switch.
 - B) It is a battery.
 - C) It is an insulator.
 - D) It is a conductor.
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