

Name:

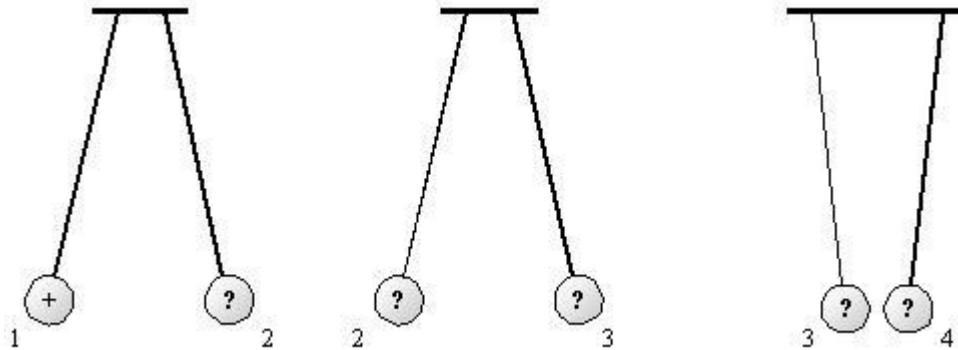
Period:

Electricity Quiz 1

1. A force of attraction always exists between two charged objects when

- ☐ A. the charges on both objects have different magnitudes.
- ☐ B. the charges on both objects have equal magnitudes.
- ☐ C. the charges on the objects have opposite signs.
- ☐ D. both objects have charges with the same sign.

2. In the diagram below, the circles represent small balls that have electric charges. Ball 1 has a positive charge, and ball 2 is repelled by ball 1. Ball 2 repels ball 3, and ball 3 attracts ball 4. What is the electric charge on ball 4?



- ☐ A. Ball 4 has a positive charge.
- ☐ B. Ball 4 has a negative charge.
- ☐ C. Ball 4 may have either a positive or negative charge.
- ☐ D. It is not possible to know the charge on ball 4.

3. The atoms of objects that are positively charged have

- ☐ A. lost electrons.
- ☐ B. gained electrons.
- ☐ C. lost protons.
- ☐ D. gained protons.

4. The fundamental unit of electric charge is equal to the charge on a(n)

- ☐ A. hydrogen atom.
- ☐ B. oil drop.
- ☐ C. single electron.
- ☐ D. single neutron.

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5. A material that has few freely moving charge carriers is most likely to be classified as a(n)

- ☐ A. metal.
- ☐ B. semiconductor.
- ☐ C. insulator.
- ☐ D. conductor.

6. The process of charging by contact works

- ☐ A. only for insulators.
- ☐ B. only for conductors.
- ☐ C. when unlike materials rub against each other.
- ☐ D. when a charged object comes in contact with the ground.

7. A conductor can be charged by _____, but an insulator cannot.

- ☐ A. grounding
- ☐ B. induction
- ☐ C. polarization
- ☐ D. contact

8. A negatively charged sheet of plastic will stick to a glass window by

- ☐ A. taking electrons from the glass.
- ☐ B. taking protons from the glass.
- ☐ C. giving electrons to the glass.
- ☐ D. polarizing the glass.

9. Explain the difference between conduction and induction.

10. Explain polarization and give an example of it.