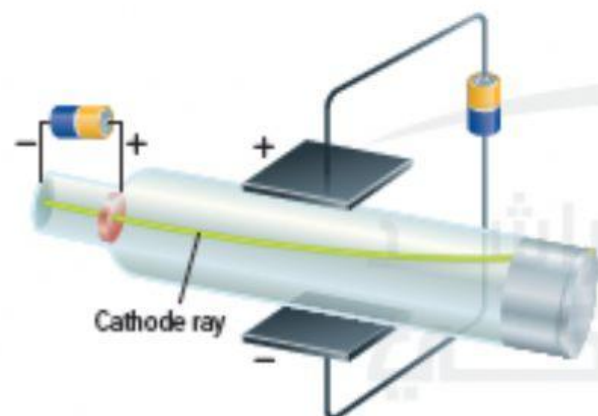


Understand Key Concepts

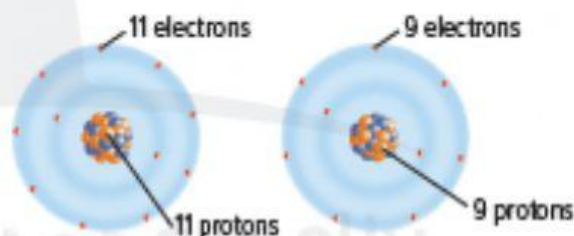
- Which part of an atom makes up most of its volume?
 - its electron cloud
 - its neutrons
 - its nucleus
 - its protons
- What did Democritus believe an atom was?
 - a solid, indivisible object
 - a tiny particle with a nucleus
 - a nucleus surrounded by an electron cloud
 - a tiny nucleus with electrons surrounding it
- If an ion contains 10 electrons, 12 protons, and 13 neutrons, what is the ion's charge?
 - 2-
 - 1-
 - 2+
 - 3+
- J.J. Thomson's experimental setup is shown below.



What is happening to the cathode rays?

- They are attracted to the negative plate.
- They are attracted to the positive plate.
- They are stopped by the plates.
- They are unaffected by either plate.

- How many neutrons does iron-59 have?
 - 30
 - 33
 - 56
 - 59
- Why were Rutherford's students surprised by the results of the gold foil experiment?
 - They didn't expect the alpha particles to bounce back from the foil.
 - They didn't expect the alpha particles to continue in a straight path.
 - They expected only a few alpha particles to bounce back from the foil.
 - They expected the alpha particles to be deflected by electrons.
- Which determines the identity of an element?
 - its mass number
 - the charge of the atom
 - the number of its neutrons
 - the number of its protons
- The figure below shows which of the following?



- two different elements
 - two different ions
 - two different isotopes
 - two different protons
- How is Bohr's atomic model different from Rutherford's model?
 - Bohr's model has a nucleus.
 - Bohr's model has electrons.
 - Electrons in Bohr's model are located farther from the nucleus.
 - Electrons in Bohr's model are located in circular energy levels.