













- Compared to the energy and charge of the electrons in the first shell of a Be atom, the electrons in the second shell of this atom have
 - less energy and the same charge
 - less energy and a different charge
 - more energy and the same charge
 - more energy and a different charge
- Which element has an atom in the ground state with a total of three valence electrons?
 - aluminum
 - lithium
 - phosphorus
 - scandium
- Magnesium and calcium have similar chemical properties because a magnesium atom and a calcium atom have the same
 - atomic number
 - mass number
 - total number of electron shells
 - total number of valence electrons
- What is the total number of valence electrons in an atom of germanium in the ground state?
 - 8
 - 2
 - 14
 - 4
- Magnesium and calcium have similar chemical properties because an atom of each element has the same total number of
 - electron shells
 - valence electrons
 - neutrons
 - protons
- What is the total number of electrons in an atom of potassium?
 - 18
 - 19
 - 20
 - 39
- Which statement explains why sulfur is classified as a Group 16 element?
 - A sulfur atom has 6 valence electrons.
 - A sulfur atom has 16 neutrons.
 - Sulfur is a yellow solid at STP.
 - Sulfur reacts with most metals.
- Which Lewis electron-dot diagram represents a nitrogen atom in the ground state?
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- Which Lewis electron-dot diagram represents an atom in the ground state for a Group 13 element?
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- An atom in the ground state contains a total of 5 electrons, 5 protons, and 5 neutrons. Which Lewis electron-dot diagram represents this atom?
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- Which element has chemical properties that are most similar to the chemical properties of fluorine?
 - boron
 - chlorine
 - neon
 - oxygen
- Which list includes elements with the most similar chemical properties?
 - Br, Ga, Hg
 - Cr, Pb, Xe
 - O, S, Se
 - N, O, F