

- An orbital is a region of space where there is a high probability of finding
  - a proton
  - a positron
  - a neutron
  - an electron
- Which phrase describes an atom?
  - a positively charged electron cloud surrounding a positively charged nucleus
  - a positively charged electron cloud surrounding a negatively charged nucleus
  - a negatively charged electron cloud surrounding a positively charged nucleus
  - a negatively charged electron cloud surrounding a negatively charged nucleus
- What is the total number of sublevels in an atom's fourth principal energy level?
  - 8
  - 16
  - 3
  - 4
- What is the maximum number of electrons in an orbital of any atom?
  - 1
  - 2
  - 6
  - 10
- What is the total number of sublevels in the fourth principal energy level?
  - 1
  - 2
  - 3
  - 4
- What is the total number of sublevels in the third principal energy level?
  - 1
  - 2
  - 3
  - 4
- What is the total number of sublevels in the second principal energy level?
  - 1
  - 2
  - 3
  - 4
- A maximum of 6 electrons can occupy
  - an *s* orbital
  - an *s* sublevel
  - a *p* orbital
  - a *p* sublevel
- The total number of sublevels in the fourth principal energy level of an atom is
  - 1
  - 2
  - 3
  - 4
- Which statement describes a concept included in the wave-mechanical model of the atom?
  - Positrons are located in shells outside the nucleus.
  - Neutrons are located in shells outside the nucleus.
  - Protons are located in orbitals outside the nucleus.
  - Electrons are located in orbitals outside the nucleus.
- Which principal energy level has a maximum of three sublevels?
  - 1
  - 2
  - 3
  - 4
- What is the maximum number of electrons that can occupy the second principal energy level?
  - 6
  - 8
  - 18
  - 32
- The total number of *d* orbitals in the third principal energy level is
  - 1
  - 5
  - 3
  - 7
- Which of the following sublevels contains the greatest number of orbitals?
  - p*
  - s*
  - f*
  - d*
- Which group of atomic models is listed in historical order from the earliest to the most recent?
  - hard-sphere model, wave-mechanical model, electron-shell model
  - hard-sphere model, electron-shell model, wave-mechanical model
  - electron-shell model, wave-mechanical model, hard-sphere model
  - electron-shell model, hard-sphere model, wave-mechanical model