

Electron Configurations Worksheet - Answers

Write the complete ground state electron configurations for the following:

- 1) lithium $1s^2 2s^1$
- 2) oxygen $1s^2 2s^2 2p^4$
- 3) calcium $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$
- 4) titanium $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^2$
- 5) rubidium $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^1$
- 6) lead $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^6 6s^2 4f^{14} 5d^{10} 6p^2$
- 7) erbium $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^6 6s^2 4f^{12}$

Write the abbreviated ground state electron configurations for the following:

- 8) helium $1s^2$ (this one cannot be abbreviated)
- 9) nitrogen $[\text{He}] 2s^2 2p^3$
- 10) chlorine $[\text{Ne}] 3s^2 3p^5$
- 11) iron $[\text{Ar}] 4s^2 3d^6$
- 12) zinc $[\text{Ar}] 4s^2 3d^{10}$
- 13) barium $[\text{Xe}] 6s^2$
- 14) polonium $[\text{Xe}] 6s^2 4f^{14} 5d^{10} 6p^4$