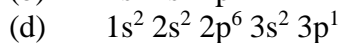
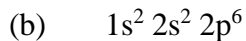
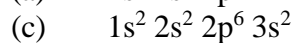
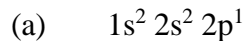


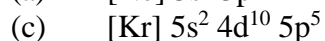
Answers to Exercise 5.2

Writing Electron Configurations and Counting Valence Electrons

1.



2.

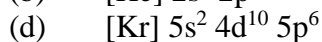


3.



The 4d electrons in I are not valence electrons. 4d is a full subshell and there are electrons in a shell outside of it (n=5).

4.

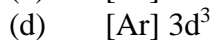
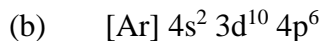
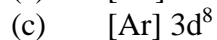


Even when the noble gas abbreviation is used, you must explicitly show the valence electrons.

This means that [He] is not an acceptable answer for 4(a), [Ne] is not an acceptable answer for 4(b), etc.

5. Write the ground state electron configuration for each of the following cations.

Use the noble gas abbreviation.



Remember to remove the electrons from the outermost shell first. So, the two 4s electrons are removed from Ni to give Ni^{2+} .