Unit 9 Problem Set

9.1) X $1s^2 2s^2 2p^6 3s^2 3p^3$

↓

1 1 1 three unpaired e^-

Can accept 3 e^- to become X^{3-}

e. Ca_3X_2 whereas $Ca \rightarrow Ca^{2+}$

This formulation results in a neutral species.

9.2) c. S

9.3) d. Cs

9.4) b. S

9.5) b. C because in adding an e^- you get half-filled p orbitals. → Energetically stable.

9.6) b. Rb

9.7) b. As Same number of valence e^-

9.8) e. Sr

9.9) d. los gases nobles

9.10) b. Across a period (from left to right) protons are added to the nucleus ~~but e^-~~ increasing the nuclear charge but e^- are added to the same outer orbital not changing the overall e^- shielding. This increases