

Additional Problem – Atomic Structure (Chapter 2)

1. The following questions relate to Figure 2.12(a) on page 35 of your text:
 - a. What is the overall goal of this figure? (That is, what is it intended to explain?)
 - b. What do the two pairs of diagonal lines represent? The numbers shown near the lines?
 - c. Why do all of the diagonal lines have negative slopes (decreasing from left to right)? What atomic property or trend explains this?
 - d. One pair of diagonal lines has a steeper slope than the other. Why? (Hint: Think about Slater's rules.)
 - e. How did the author cited in the figure caption determine where the diagonal lines cross? (Hint: What is the first thing you would do in trying to answer Problem 2.32 on p. 43?)