

PSII Room 279 - How to Read a Box in the Periodic Table

I. Introduction

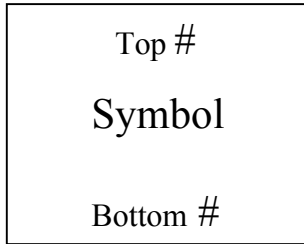
1. Name the 3 particles that are in atoms:

2. Which 2 particles stay in a clump in the center of their atom?

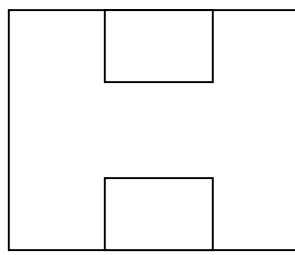
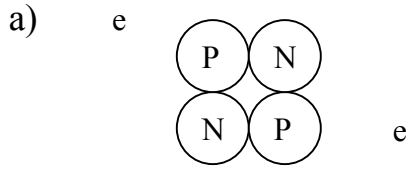
3. What is this “clump” called? _____
4. Which particle zooms around the “clump”? _____
5. Go back to #1 and write the correct charge beside the name of each particle. Your choices are “+”, “0”, and “—”.

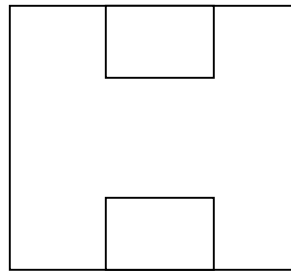
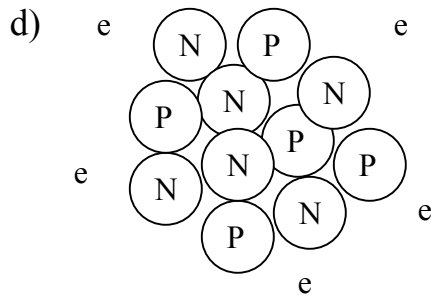
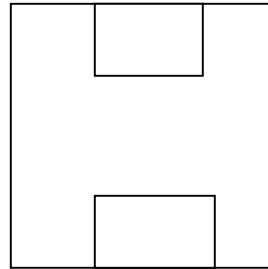
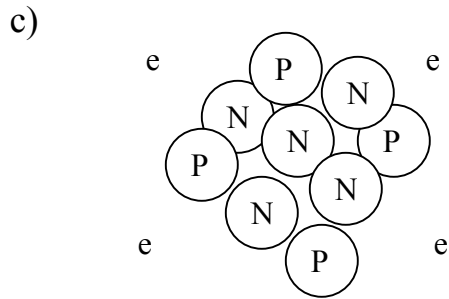
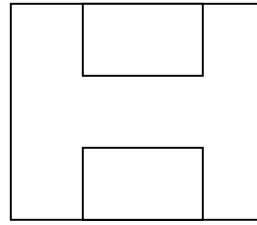
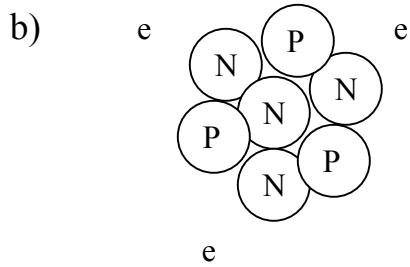
II. I show you the atom, you fill in the box.

Each atom is described by a “box” in the periodic table. Each box has a symbol in the middle, a number at the top, and a number at the bottom:



6. What does the top number tell you?
7. What does the bottom number tell you?
8. For each atom pictured below, write in the correct numbers in the atom’s “box.”

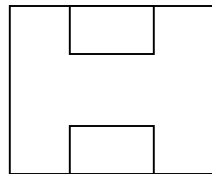




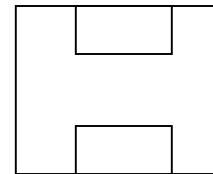
9. These are starting to get too big to draw. For the atoms below the number of protons, neutrons, and electrons is given, but the atom is not drawn.

Again, for each atom, write in the correct numbers in the atom's "box."

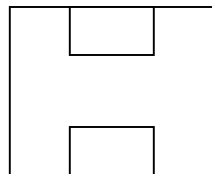
a) 13P 13e 14 N



b) 14 P 14e 14N



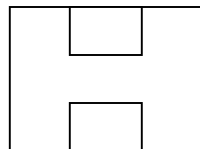
c) 18P 18e 22N



d) 26 P 26e 30 N



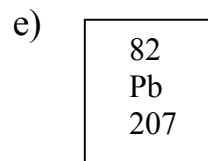
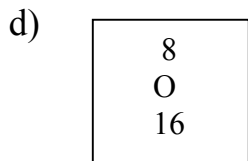
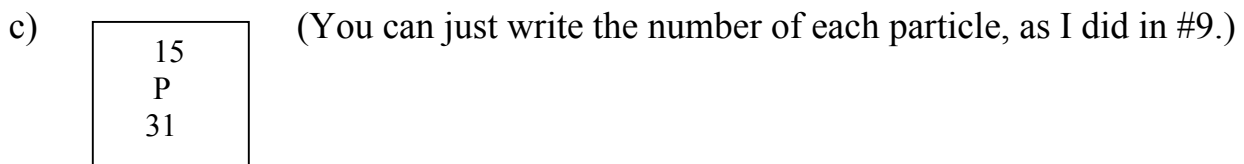
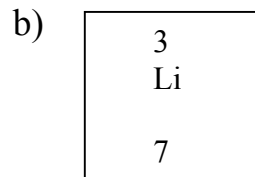
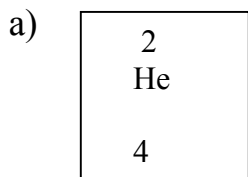
e) 92P 92e 146N



10. Turn to the periodic table in your text. Use it to write the correct symbol in all the boxes above, in #8 & #9.

III. I show you the “box”, you draw the atom.

11. Draw the atom for each “box.”



12. Which element did you just draw in 11e? (*Pb*) Use the table. _____

13. Use the periodic table. Look up each element’s “box” and sketch its atom. (*They are all among the first 30 elements.*)

a) Carbon

b) Titanium

c) Nickel

d) Hydrogen (*tricky*)