

(Key)

M: Draw Lewis dot diagrams based on number of valence electrons.

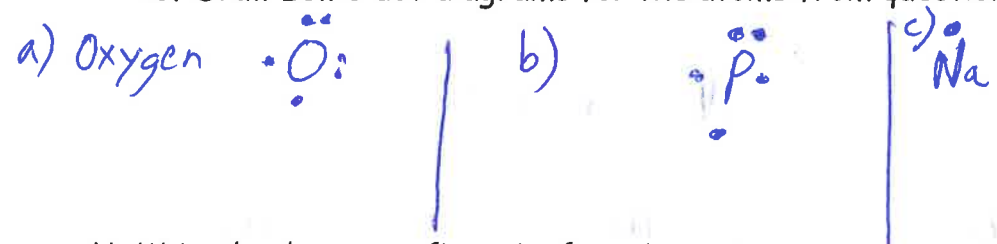
12. How many valence electrons do the following atoms have?

a. Oxygen 6

b. Phosphorus 5

c. Sodium 1

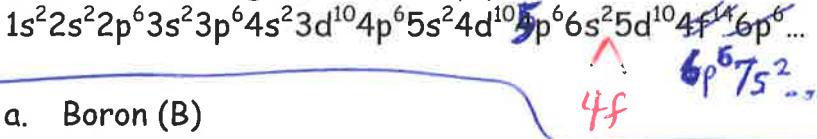
13. Draw Lewis dot diagrams for the atoms from question 12 above.



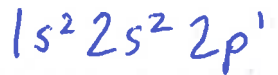
N. Write the electron configuration for a given atom.

14. Write electron configurations for the following atoms.

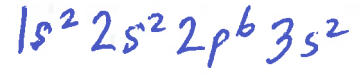
Use the following order to help you:



a. Boron (B)

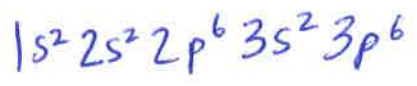


b. Magnesium (Mg)



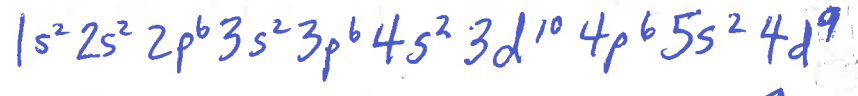
c. Argon (Ar)

atomic #18



d. Silver (Ag)

atomic #47



↑  
This matches spot Silver on the periodic table. The superscripts

(Ken)

# Unit 1 Quiz Review:

## Learning Targets

D: Use the periodic table to determine the atomic number and atomic mass.

1. What is the atomic mass of Calcium? 40.08
2. The atomic number tells you the number of protons and electrons in an atom.
3. Give the atomic number and atomic mass of Nitrogen.

7                      14.00 or 14.01

E: Use the periodic table to determine the protons, neutrons, and electrons in an atom.

4. Sulfur has 16 protons, 16 neutrons, and 16 electrons.

$\approx 32 - 16 = 16$   
mass      atomic #

5. Which atom has 5 protons and 6 neutrons?

Boron

I: Distinguish between an atom and its isotope.

6. Potassium-39 and Potassium-40 are called isotopes.  
Normal potassium                      (diff masses/# of neutrons vary)
7. Potassium-39 and Potassium-40 have the same number of protons, but a different number of neutrons.

K: Distinguish between an atom in its ground state and its excited state.

8. Describe what it means for an atom to be "excited"?  
It gained energy (maybe from heat/fire) and electron jumped.

9. What happens when an atom returns to its ground state?  
It gives off a light (photon)

L: Describe how atoms emit photons.

10. What is a photon?  
It is light. -

11. Use the information from questions 7 and 8 to explain how an atom emits photons.

Fire (or other heat energy) excites the atom and it moves from the ground state to excited state. When it returns from excited state to ground state, it gives off light (a photon).