

Part C: Electron Configuration

12. How many electrons can each level hold? 1st = _____ 2nd = _____ 3rd = _____

13. What term is used for the electrons in the outermost shell or energy level? _____

14. Scientists use two types of diagrams to show the electron configuration for atoms. Follow your teacher's directions to complete the diagrams.

Sulfur

Atomic # = 16

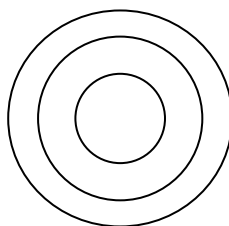
Atomic Mass = 32

Protons = _____

Neutrons = _____

Electron = _____

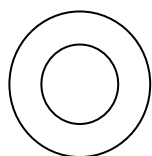
Bohr Diagram
Shows all electrons



Lewis Structure
Shows valence electrons

S

15. Calculate the missing information and then draw the Bohr Diagram and Lewis Structure for each element.



Li

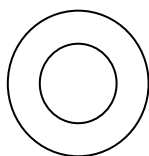
Atomic # = 3

Mass # = 7

of P = _____

of N = _____

of E = _____



Ne

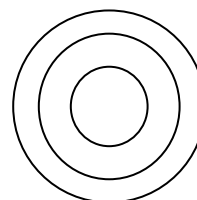
Atomic # = 10

Mass # = 20

of P = _____

of N = _____

of E = _____



Mg

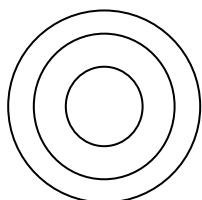
Atomic # = 12

Mass # = 24

of P = _____

of N = _____

of E = _____



Cl

Atomic # = 17

Mass # = 35

of P = _____

of N = _____

of E = _____



He

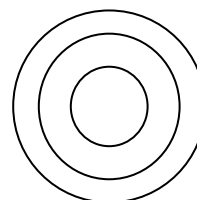
Atomic # = 2

Mass # = 4

of P = _____

of N = _____

of E = _____



Si

Atomic # = 14

Mass # = 28

of P = _____

of N = _____

of E = _____

16. Answer the questions below based on the elements in question #15.

(1) Which elements had a filled outermost shell? _____

(2) Which element would be most likely to lose electrons in a chemical bond? _____

(3) Which element would be most likely to gain electrons in a chemical bond? _____

(4) Which elements are not likely to bond with other elements? _____ Why? _____