

# ANSWER KEY

## EXTRA PRACTICE: Bohr Models/Electron-Dots/Valence Electrons Name: \_\_\_\_\_

an atomic symbol is reduced to its smallest basic components and is used to represent the element.

Draw the Bohr Model for each of the following elements using the **SMALLER** font element symbol on left.

Then draw the Electron-Dot Structure for each element using the **LARGER** font element symbol on right.

1. = atomic symbol

$z=3$



Li

2.

$z=4$

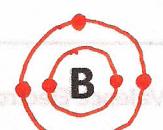


Be

• Be •

3. = atomic symbol

$z=5$

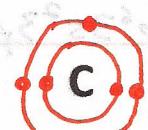


B

• B •

4.

$z=6$

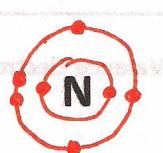


C

• C •

5. = atomic symbol

$z=7$

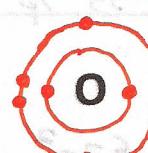


N

• N •

6.

$z=8$

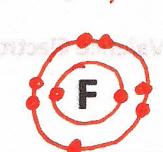


O

• O •

7. = atomic symbol

$z=9$

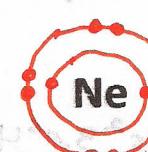


F

• F •

8.

$z=10$

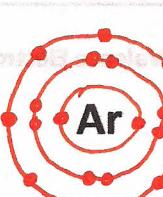


Ne

• Ne •

9. = atomic symbol

$z=18$

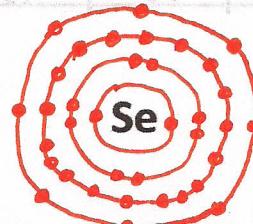


Ar

• Ar •

10.

$z=34$



Se

• Se •

Write the electron configuration notation (long hand method) for each of the following elements. Circle the identity of the valence electrons and determine the number of valence electrons.

87. Francium =  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^6 6s^2 4f^{14} 5d^{10} 6p^6 7s^1$

Valence Electrons = 1

50. Tin =  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^2$

Valence Electrons = 4

38. Strontium =  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2$

Valence Electrons = 2

15. Phosphorus =  $1s^2 2s^2 2p^6 3s^2 3p^3$

Valence Electrons = 5

33. Arsenic =  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^3$

Valence Electrons = 5

19. Potassium =  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1$

Valence Electrons = 1

12. Magnesium =  $1s^2 2s^2 2p^6 3s^2$

Valence Electrons = 2

53. Iodine =  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^5$

Valence Electrons = 7

31. Gallium =  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^1$

Valence Electrons = 3

35. Bromine =  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^5$

Valence Electrons = 7