Name: _____ Atomic Structure Notes Period _____

1 Atomic Structure

1.1 atomic number and mass

1. The _____ is the number of _____ in the nucleus of an atom.
2. The _____ is the total number of _____ and _____in the nucleus of an atom.
3. ^{1}H

   What does the 1 mean?

   _____

   $^{4}_{2}He$
4. What does the 4 mean?

   _____
5. What does the 2 mean?

   _____
6. $^{7}_{3}Li$

   How many protons does Lithium have? _____

   How many neutrons does Lithium have? _____
7. ^{2}H

   based on this symbol, how many protons does Hydrogen have? _____

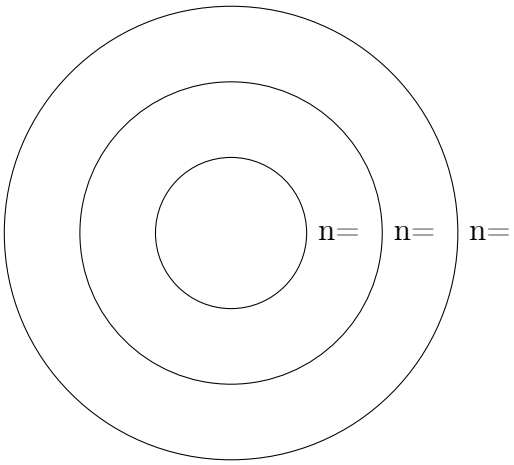
   How many neutrons? _____

1.2 The Bohr model

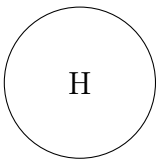
8. The Bohr Model - Bohr proposed that an atom was a nucleus with electrons "orbiting" in different _____.
9. Electrons can only have certain energy values known as _____

1.3 Electron Configuration

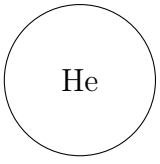
10. The electrons closest to the nucleus have the _____ energy, while those further from away have _____ energy.



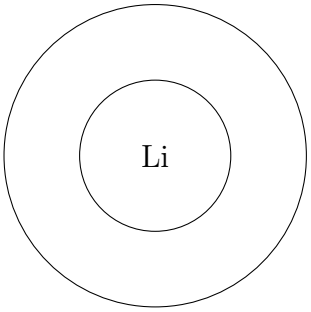
11. draw the electron configuration for H



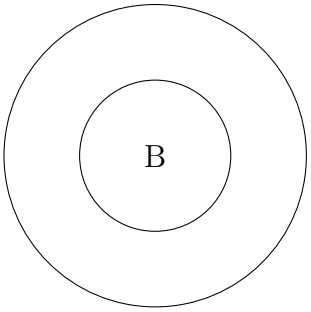
12. draw the electron configuration for He



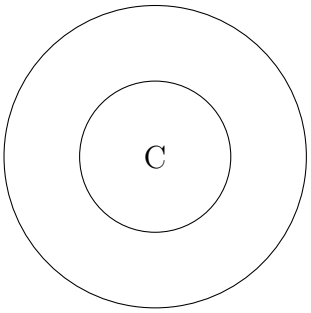
13. draw the electron configuration for Li



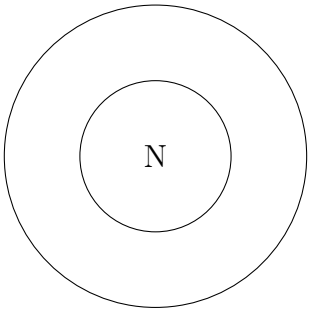
14. draw the electron configuration for Boron B



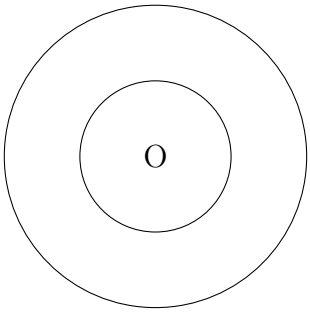
15. draw the electron configuration for Carbon C



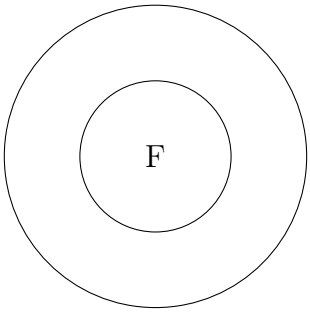
16. draw the electron configuration for Nitrogen N



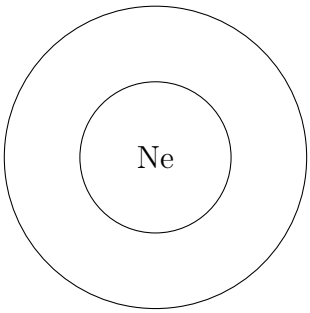
17. draw the electron configuration for Oxygen O



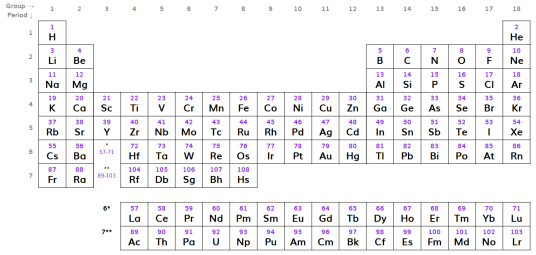
18. draw the electron configuration for Flourine F



19. draw the electron configuration for Neon Ne



2 periodic table



20. The Periodic Table has _____ periods and _____ groups.

21. The periods are _____ and the groups are _____.

22. You can know the _____ configuration of an element from its _____ in the periodic table.

23. The number of electron _____ (or energy levels) is equal to the _____ number.

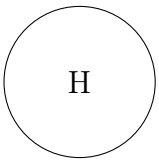
24. The number of valence electrons is related to the _____ number.

25. atoms in groups _____ and _____ are equal to the group number.

26. atoms in groups _____ to _____ are equal to the group number minus 10.

2.0.1 Practice

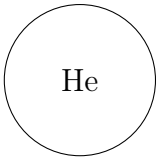
27. draw the electron configuration for H



How many valence electrons does it have?

_____

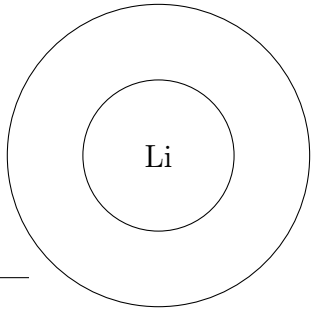
28. draw the electron configuration for He



How many valence electrons does it have?

_____

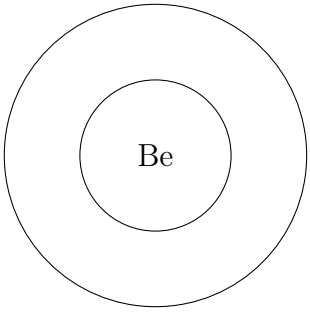
29. draw the electron configuration for Li



How many valence electrons does it have?

_____

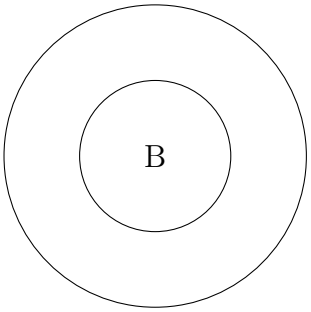
30. draw the electron configuration for Be



How many valence electrons does it have?

_____

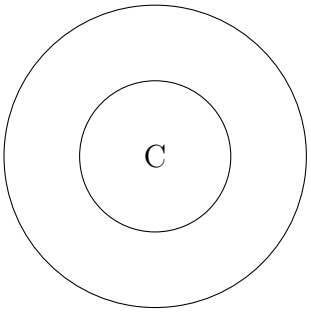
31. draw the electron configuration for Boron B



How many valence electrons does it have?

_____

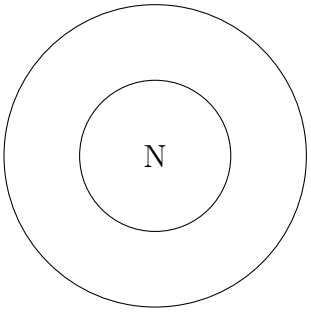
32. draw the electron configuration for Carbon C



How many valence electrons does it have?

_____

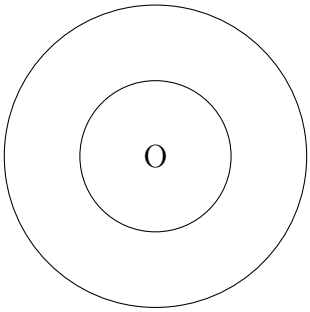
33. draw the electron configuration for Nitrogen N



How many valence electrons does it have?

_____

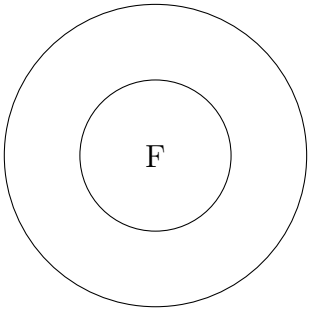
34. draw the electron configuration for Oxygen O



How many valence electrons does it have?

_____

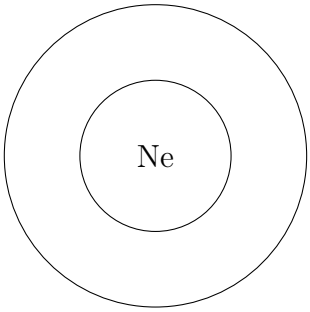
35. draw the electron configuration for Flourine F



How many valence electrons does it have?

_____

36. draw the electron configuration for Neon Ne



How many valence electrons does it have?

_____