

1 Atomic Structure

1.1 atomic number and mass

1. The atomic number is the number of protons in the nucleus of an atom.
2. The mass number is the total number of protons and neutrons in the nucleus of an atom.

3.



What does the 1 mean?

of protons and neutrons

4. What does the 4 mean?

of protons and neutrons

5. What does the 2 mean?

of neutrons

6.



How many protons does Lithium have?

3

How many neutrons does Lithium have?

7 - 3 = 4

7.

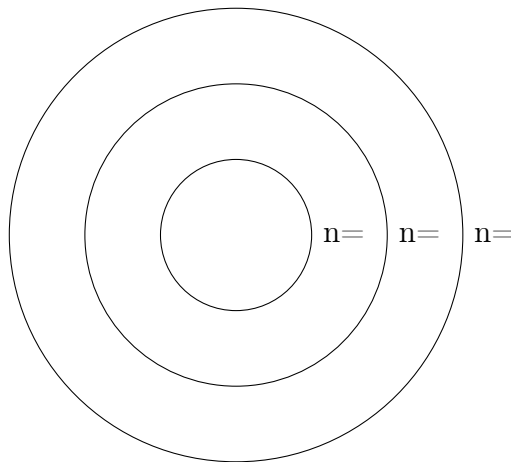
based on this symbol, how many protons does Hydrogen have? 1How many neutrons? 1

1.2 The Bohr model

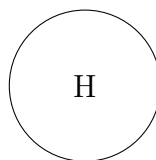
8. The Bohr Model - Bohr proposed that an atom was a nucleus with electrons "orbiting" in different energy levels.
9. Electrons can only have certain energy values known as energy levels

1.3 Electron Configuration

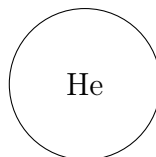
10. The electrons closest to the nucleus have the lowest energy, while those further from away have higher energy.



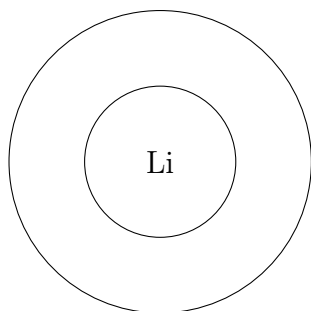
11. draw the electron configuration for H



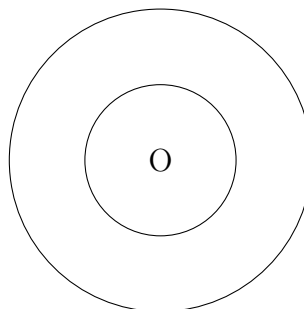
12. draw the electron configuration for He



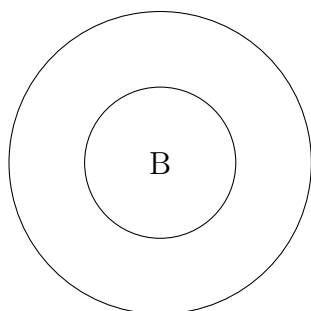
13. draw the electron configuration for Li



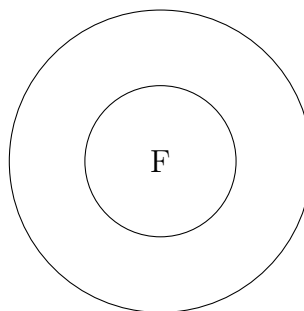
17. draw the electron configuration for Oxygen O



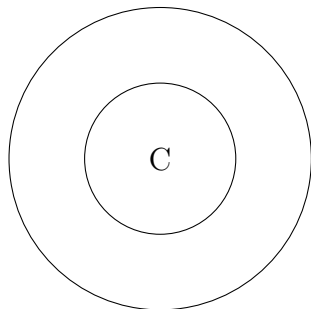
14. draw the electron configuration for Boron B



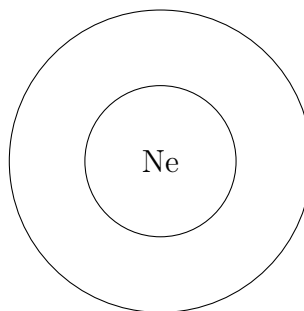
18. draw the electron configuration for Fluorine F



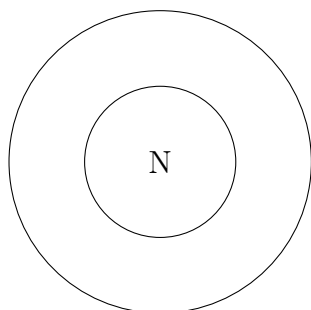
15. draw the electron configuration for Carbon C



19. draw the electron configuration for Neon Ne



16. draw the electron configuration for Nitrogen N



2 periodic table

Group →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Period ↓																		
1	1 H																	2 He
2	3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
3	11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
4	19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
5	37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
6	55 Cs	56 Ba	* 57-71	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
7	87 Fr	88 Ra	** 89-103	104 Rf	105 Db	106 Sg	107 Bh	108 Hs										
			6*	57 La	58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu
			7**	89 Ac	90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr

20. The Periodic Table has 7 periods and 18 groups.
21. The periods are horizontal and the groups are vertical.
22. You can know the electron configuration of an element from its position in the periodic table.
23. The number of shells is equal to the Period number.