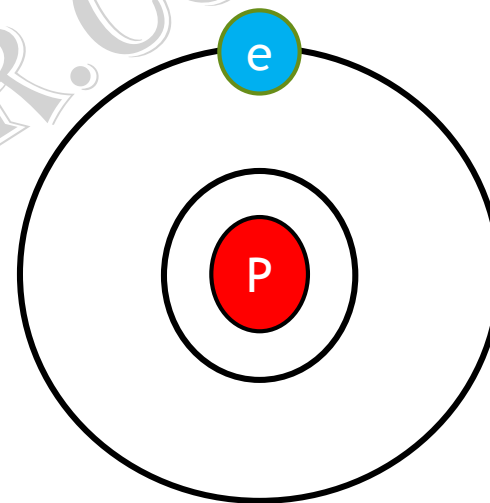


# PERIODIC PROPERTIES OF ELEMENTS FROM HYDROGEN TO NEON

By Tutoring Masters

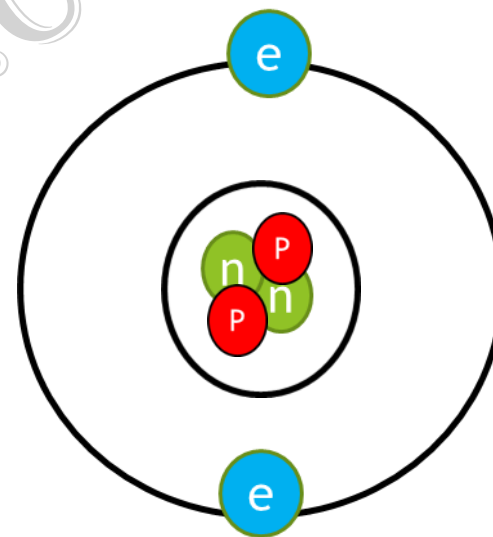
# HYDROGEN

- ▶ Symbol H
- ▶ Atomic number: 1
- ▶ Mass number: 1
- ▶ Atomic mass: 1.00784u
- ▶ Nature & state: non-metal,  
diatomic gas
- ▶ Electronic configuration:  $1s^1$
- ▶ Melting point:  $-259.14^{\circ}\text{C}$
- ▶ Boiling point:  $-252.87^{\circ}\text{C}$
- ▶ Group number: I-A
- ▶ Ions  $\text{H}_3\text{O}^+(\text{H}^+)$ ,  $\text{H}^-$



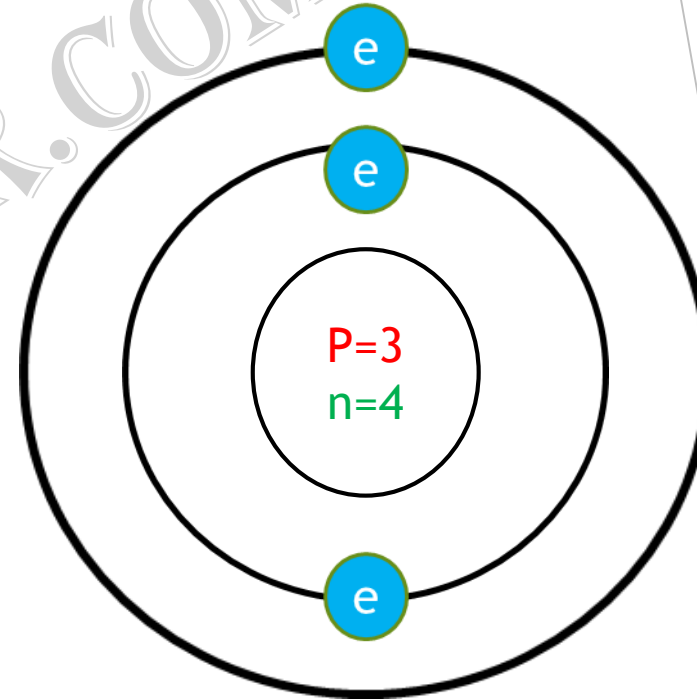
# HELIUM

- ▶ Symbol He
- ▶ Atomic number: 2
- ▶ Mass number: 4
- ▶ Atomic mass: 4.002602u
- ▶ Nature & state: Noble gas
- ▶ Electronic configuration:  $1s^2$
- ▶ Melting point:  $-272.2^{\circ}\text{C}$
- ▶ Boiling point:  $-268.9^{\circ}\text{C}$
- ▶ Group number: VIII-A
- ▶ Oxidation state: 0



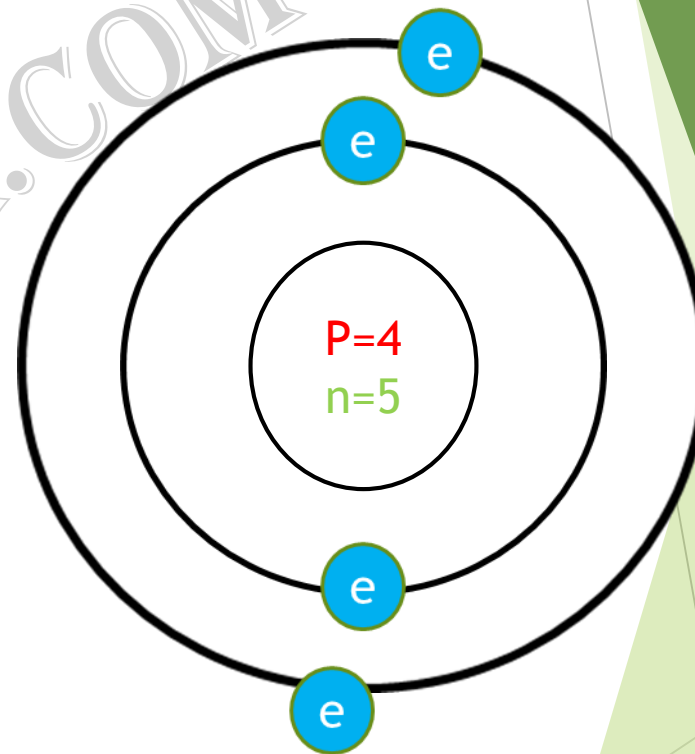
# LITHIUM

- ▶ Symbol: Li
- ▶ Atomic number: 3
- ▶ Mass number: 7
- ▶ Atomic mass: 6.941u
- ▶ Nature & state: Metal, solid
- ▶ Electronic configuration:  $1s^2, 2s^1$
- ▶ Melting point:  $180.54^{\circ}\text{C}$
- ▶ Boiling point:  $1342^{\circ}\text{C}$
- ▶ Group number: I-A (Alkali metal)
- ▶ Ion:  $\text{Li}^+$



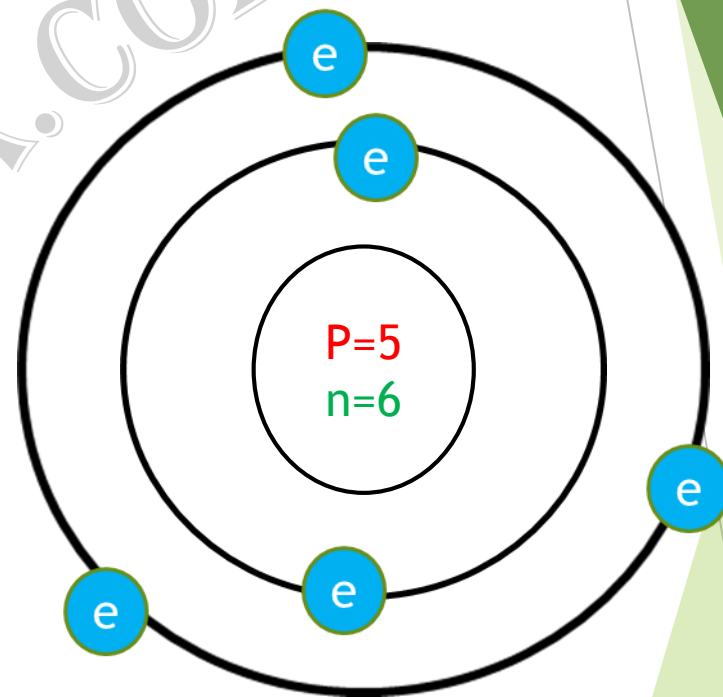
# BERYLLIUM

- ▶ Symbol Be
- ▶ Atomic number: 4
- ▶ Mass number: 9
- ▶ Atomic mass: 9.012u
- ▶ Nature & state: Metal, solid
- ▶ Electronic configuration:  $1s^2, 2s^2$
- ▶ Melting point:  $1287^{\circ}\text{C}$
- ▶ Boiling point:  $2970^{\circ}\text{C}$
- ▶ Group number: II-A (Alkaline-earth metal)
- ▶ Ion:  $\text{Be}^{+2}$



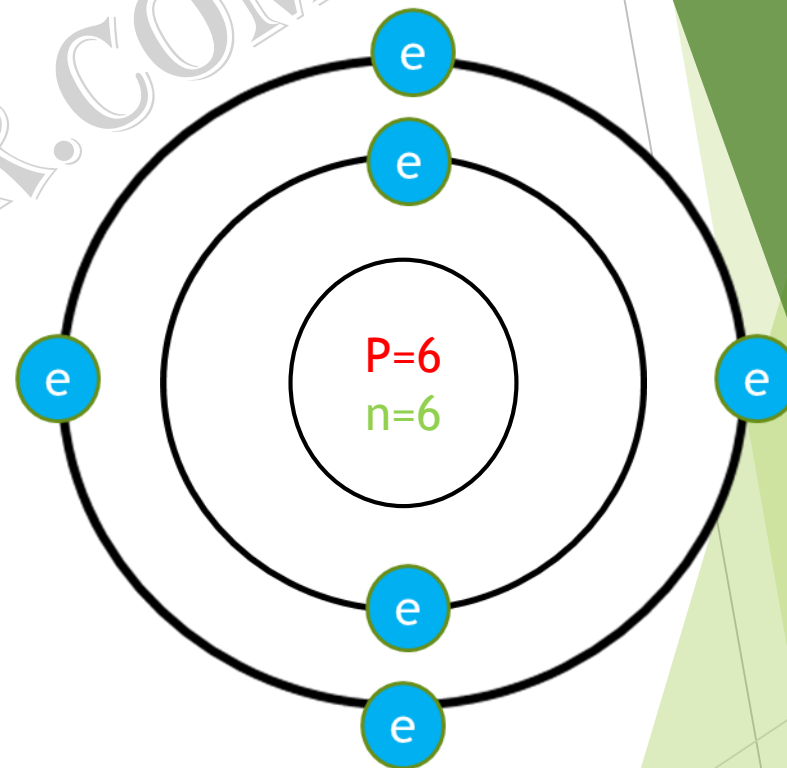
# BORON

- ▶ Symbol B
- ▶ Atomic number: 5
- ▶ Mass number: 11
- ▶ Atomic mass: 10.811u
- ▶ Nature & state: Metalloid, solid
- ▶ Electronic configuration:  $1S^2, 2S^2, 2P^1$
- ▶ Melting point:  $2300^{\circ}C$
- ▶ Boiling point:  $2550^{\circ}C$
- ▶ Group number: III-A (Boron family)
- ▶ Ion:  $B^{+3}$



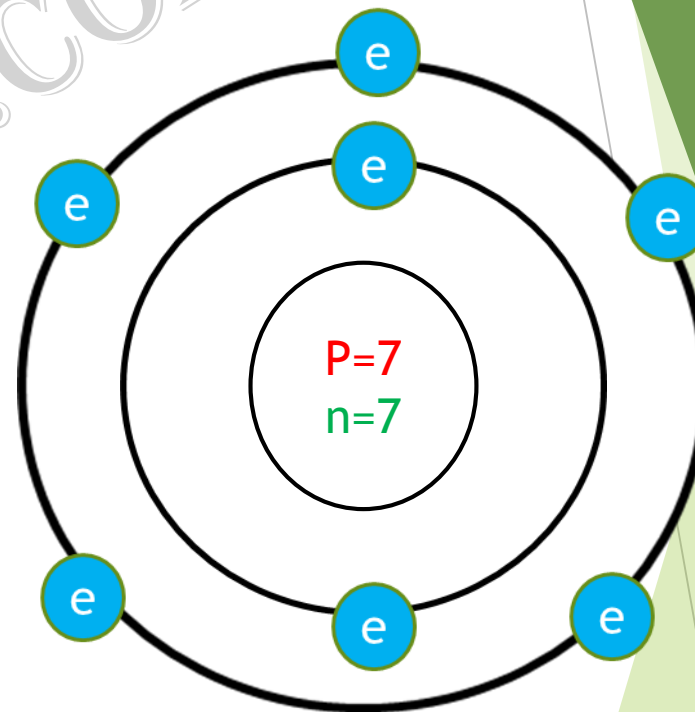
# CARBON

- ▶ Symbol C
- ▶ Atomic number: 6
- ▶ Mass number: 12
- ▶ Atomic mass: 12.0107u
- ▶ Nature & state: Non-metal, solid
- ▶ Electronic configuration:  $1S^2, 2S^2, 2P^2$
- ▶ Melting point:  $3,367^{\circ}C$
- ▶ Boiling point:  $4827^{\circ}C$
- ▶ Group number: IV-A (Carbon family)
- ▶ Ion:  $C^{+4}, C^{-4}, C^{+2}$



# NITROGEN

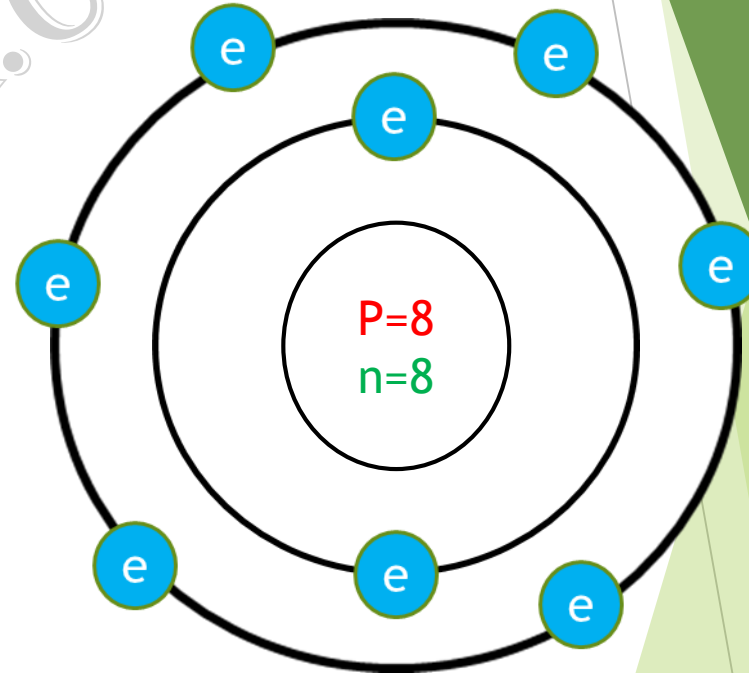
- ▶ Symbol N
- ▶ Atomic number: 7
- ▶ Mass number: 14
- ▶ Atomic mass: 14.0067u
- ▶ Nature & state: Non-metal, diatomic gas
- ▶ Electronic configuration:  $1S^2, 2S^2, 2P^3$
- ▶ Melting point:  $-210^{\circ}C$
- ▶ Boiling point:  $-195.8^{\circ}C$
- ▶ Group number: V-A (Nitrogen family)
- ▶ Ion:  $N^{+3}, N^{+4}, N^{+5}, N^{-1}, N^{-3}$





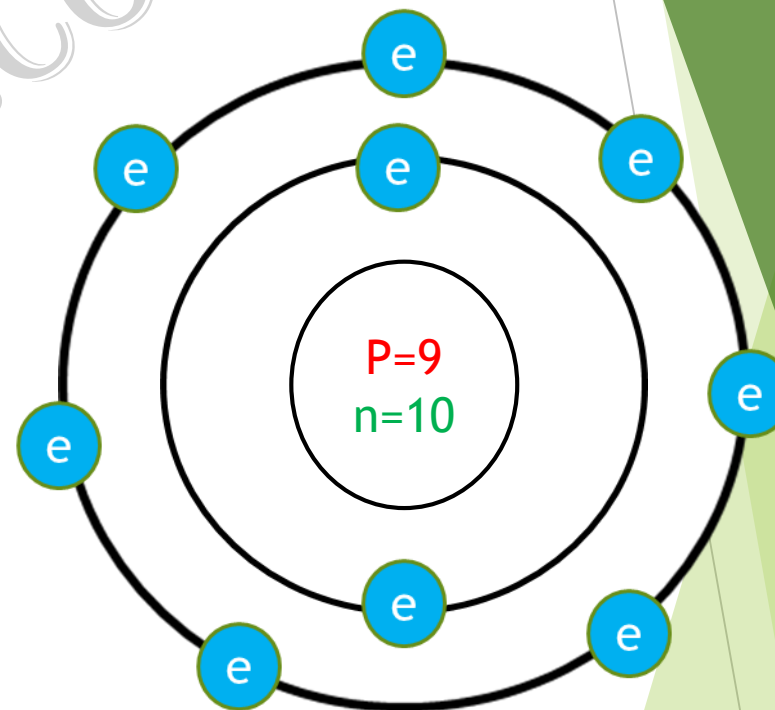
# OXYGEN

- ▶ Symbol: O
- ▶ Atomic number: 8
- ▶ Mass number: 16
- ▶ Atomic mass: 15.999u
- ▶ Nature & state: Non-metal, diatomic gas
- ▶ Electronic configuration:  $1s^2, 2s^2, 2p^4$
- ▶ Melting point:  $-218.8^{\circ}\text{C}$
- ▶ Boiling point:  $-183^{\circ}\text{C}$
- ▶ Group number: VI-A (Oxygen family)
- ▶ Ion:  $\text{O}^{-2}, \text{O}^{-1}, \text{O}^{+2}$



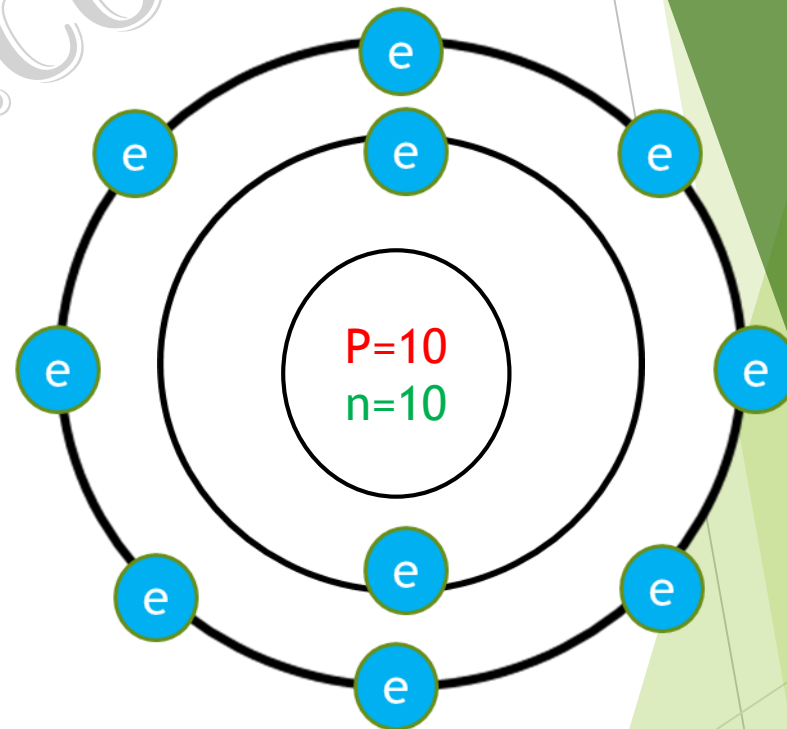
# FLUORINE

- ▶ Symbol F
- ▶ Atomic number: 9
- ▶ Mass number: 19
- ▶ Atomic mass: 18.9984u
- ▶ Nature & state: Non-metal, diatomic gas
- ▶ Electronic configuration:  $1S^2, 2S^2, 2P^5$
- ▶ Melting point:  $-219.6^{\circ}\text{C}$
- ▶ Boiling point:  $-188.1^{\circ}\text{C}$
- ▶ Group number: VII-A (Halogen)
- ▶ Ion:  $\text{F}^{-1}$



# NEON

- ▶ Symbol Ne
- ▶ Atomic number: 10
- ▶ Mass number: 20
- ▶ Atomic mass: 20.1797u
- ▶ Nature & state: Non-metal, noble gas
- ▶ Electronic configuration:  $1S^2, 2S^2, 2P^6$
- ▶ Melting point:  $-248.6^{\circ}C$
- ▶ Boiling point:  $-246^{\circ}C$
- ▶ Group number: VIII-A
- ▶ Oxidation state: 0



# Thanks for watching

Coming up: Electronic  
configuration of the next 108  
elements!!!!