

Objective 3: Identify the number of total electrons (Bohr Diagram) and valence electrons (Electron Dot Diagrams) and draw the corresponding diagrams.

Part 1: Neutral Atoms

Element Symbol	# of total e-	Bohr Diagram	# of valence e-	Electron Dot Diagram	# E levels
Na	11		1	Na	3
Mg	12		2	Mg	3
Al	13		3	Al	3
N	7		5	N	2
S	16		6	S	3
Cl	17		7	Cl	3

metals have ↓ EN so give up e⁻
nonmetals have ↑ EN so gain e⁻

1. How do the # of valence e⁻ of neutral & ions change?

Neutral atoms were all diff, while ions were all same (8)





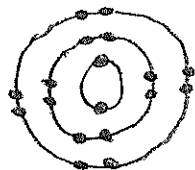
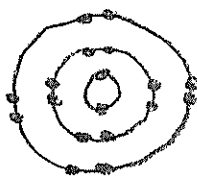
2. How do total e⁻ of neutral & ions change? Pattern?

Neutral atoms were all diff, while ions were either 9 or 10. Metals were 8, nonmetals were 10. Metals lost e⁻, nonmetals gained e⁻

3. What happ. to # of E levels for metals? Non? Metals lost E level. Non stayed same

Part 2: Ions

Part 1: Neutral Atoms

Element Symbol	# of total e-	Bohr Diagram	# of valence e-	Electron Dot Diagram	# E levels
Na ⁺	10		8	Na ⁺ *New outer E level	2
Mg ²⁺	10		8	Mg ²⁺ *New outer E level	2
Al ³⁺	10		8	Al ³⁺ *New outer E level	2
N ³⁻	10		8	:N: ³⁻	2
S ²⁻	18		8	:S: ²⁻	3
Cl ⁻	18		8	:Cl: ⁻	3