

Valence Electrons Practice Worksheet

1. Apply your knowledge of valence electrons, Lewis dot structures, and the octet rule to complete the table below.

Element	Valence Electrons		Lewis dot structures	To achieve a full valence shell	
	Main e ⁻ level	Number of valence electrons		Number of e ⁻ gained	Number of e ⁻ lost
Hydrogen					
Lithium					
Cesium					
Magnesium					
Calcium					
Strontium					
Boron					
Aluminum					

2. Fill in the table below with the correct values.

Element	Ion symbol	Number of protons	Number of electrons	Charge	Ion type
		35	36		
	Sr ²⁺				Cation
Oxygen			10	-2	Anion
Magnesium			10		
			10	+3	
Selenium					Anion
	Li ⁺				

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Answers

1. Apply your knowledge of valance electrons, Lewis dot structures, and the octet rule to complete the table below.

Element	Valence Electrons		Lewis dot structures	To achieve a full valence shell	
	Main e ⁻ level	Number of valence electrons		Number of e ⁻ gained	Number of e ⁻ lost
Hydrogen	1	1	H•	1	1
Lithium	2	1	Li•	7	1
Cesium	6	1	Cs•	7	1
Magnesium	3	2	Mg:	6	2
Calcium	4	2	Ca:	6	2
Strontium	5	2	Sr:	6	2
Boron	2	3	• B•	5	3
Aluminum	3	3	• Al•	5	3

2. Fill in the table below with the correct values.

Element	Ion symbol	Number of protons	Number of electrons	Charge	Ion type
Bromine	Br ⁻	35	36	-1	Anion
Strontium	Sr ²⁺	38	36	+2	Cation
Oxygen	O ²⁻	8	10	-2	Anion
Magnesium	Mg ²⁺	12	10	+2	Cation
Aluminum	Al ³⁺	13	10	+3	Cation
Selenium	Se ²⁻	34	36	-2	Anion
Lithium	Li ⁺	3	2	+1	Cation