

Name \_\_\_\_\_ Date Due \_\_\_\_\_

# Homework - Ionic Compounds

Atomic no. Symbol Name Electron Arr.
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Group 1                  Group 2                  Group 3                  Group 4                  Group 5                  Group 6                  Group 7                  Group 8

1 H Hydrogen 1	
3 Li Lithium 2,1	4 Be Beryllium 2,2
11 Na Sodium 2,8,1	12 Mg Magnesium 2,8,2
19 K Potassium 2,8,8,1	20 Ca Calcium 2,8,8,2
37 Rb Rubidium 2,8,18,8,1	38 Sr Strontium 2,8,18,8,2
55 Cs Caesium 2,8,18,18,8,1	56 Ba Barium 2,8,18,18,8,2
87 Fr Francium 2,8,18,32,18,8,1	88 Ra Radium 2,8,18,32,18,8,2

					2 He Helium 2
5 B Boron 2,3	6 C Carbon 2,4	7 N Nitrogen 2,5	8 O Oxygen 2,6	9 F Fluorine 2,7	10 Ne Neon 2,8
13 Al Aluminium 2,8,3	14 Si Silicon 2,8,4	15 P Phosphorus 2,8,5	16 S Sulfur 2,8,6	17 Cl Chlorine 2,8,7	18 Ar Argon 2,8,8
31 Ga Gallium 2,8,18,3	32 Ge Germanium 2,8,18,4	33 As Arsenic 2,8,18,5	34 Se Selenium 2,8,18,6	35 Br Bromine 2,8,18,7	36 Kr Krypton 2,8,18,8
49 In Indium 2,8,18,18,3	50 Sn Tin 2,8,18,18,4	51 Sb Antimony 2,8,18,18,5	52 Te Tellurium 2,8,18,18,6	53 I Iodine 2,8,18,18,7	54 Xe Xenon 2,8,18,18,8
81 Tl Thallium 2,8,18,32,18,3	82 Pb Lead 2,8,18,32,18,4	83 Bi Bismuth 2,8,18,32,18,5	84 Po Polonium 2,8,18,32,18,6	85 At Astatine 2,8,18,32,18,7	86 Rn Radon 2,8,18,32,18,8
113 Uut Ununtrium 2,8,18,32,32,18,3	114 Fl Flerovium 2,8,18,32,32,18,4	115 Uup Ununpentium 2,8,18,32,32,18,5	116 Lv Livermorium 2,8,18,32,32,18,6	117 Uus Ununseptium 2,8,18,32,32,18,7	118 Uuo Ununoctium 2,8,18,32,32,18,8

1. What happens to electrons when atoms form ions?

2. In what way would the charge of a neutral atom change when it

a. Loses an electron?

b. Gains an electron?

Elements in Group 1 give away one electron to form single positive ions (*e.g.*  $\text{Li}^+$ )

Elements in Group 2 give away two electrons to form double positive ions (*e.g.*  $\text{Be}^{2+}$ )

Elements in Group 6 receive two electrons to form double negative ions (*e.g.*  $\text{O}^{2-}$ )

Elements in Group 7 receive one electrons to form single negative ions (*e.g.*  $\text{F}^-$ )

3. Complete the following table...

Name	Symbol of atom	Symbol of ion	Electron arrangement of atom	Electron arrangement of ion
Lithium	Li	$\text{Li}^+$	2,1	2
Sodium				
Beryllium	Be	$\text{Be}^{2+}$	2,2	2
Magnesium				
Oxygen	O	$\text{O}^{2-}$	2,6	2,8
Sulphur				
Fluorine	F	$\text{F}^-$	2,7	2,8
Chlorine				