

Name _____ Period _____

CP Chemistry of the Earth

Assignment 4C – Atomic Structure Review (Part 2 – Octet Rule Ions).

20 Points

Define the following terms based on the ion review

Octet Rule	Ionization Energy
Cation	Anion

The following is a chart showing the group and valance electrons w/ Lewis Dot Structures

Group Number	1A 1	2A 2	1B – 10B	3A 13	4A 14	5A 15	6A 16	7A 17	8A 18
Valance Electrons (e ⁻)	1	2	2	3	4	5	6	7	8
Lewis Dot Structure	X•	•X•	•X•	•X•	•X•	•X•	•X•	•X•	•X•
Ion Charge	+1	+2	Var.	+3	+4	-3	-2	-1	0
Lose/Gain e ⁻	Lose 1	Lose 2	Var.	Lose 3	Lose 4	Gain 3	Gain 2	Gain 1	Gain 0
Ion Valance Electrons (e ⁻)	0	0	0	0	0	8	8	8	8

Complete the chart below for ions and ionization based on the chart above

Element Symbol	Na	Br	Sr	S	Fe	V	Ag	Ti
Group Number								
Valance Electrons					2	3	1	4
Ion Charge								
Lose/Gain e ⁻								
Ion Valance Electrons								

* For Transition Elements, Use the same chart section based on the valance electrons shown